

TECHNICAL CONDITIONS OF CONTRACT (TCC)	
PREAMBLE FOR BOQ CUM RATE SCHEDULE	
1	Details of the items in the BOQ Cum Rate Schedule shall be read in conjunction with the tender specifications, drawings and other documents and shall have precedence over any contrary statement mentioned anywhere in this document.
2	The work shall be carried out as per construction drawings, specifications, the description of the items in this schedule and/or Engineer's instructions, Drawings enclosed with these documents are only indicative giving some idea of the type of work involved. The layout, sizes and details of the building, structures and foundations shown in tender drawings may vary at a large extent during actual construction. Final drawings will be issued progressively during the execution of the work.
3	Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the Engineer.
4	Unless specifically mentioned otherwise in the contract, the contractor shall quote his rates for the finished items and shall provide for the complete cost towards fuel, tools, tackle, equipment, constructional plant , temporary works, labour materials, levies , taxes , transport, layout, repairs, rectification, maintenance till handing over, supervision, shops, establishments, services, temporary roads, revenue expenses, contingencies, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the works according to the contract.
5	The rate shall also be inclusive of carrying out topography survey of site to establish levels and coordinates at suitable intervals, form existing grid levels and coordinates furnished by the owner, establish bench marks, setting out the location and levels of the proposed structures, constructions and making references, pillars and other identification marks etc. No separate payment will be made towards the same.
6	The quantities of the various items mentioned in the BOQ cum Rate Schedule are approximate and may vary up to any extent or be deleted altogether. The overall variation in contract value on execution shall be dealt as per GCC. Contractor has to obtain prior approval of BHEL/ Customer before procurement of bought out items/ building materials.
7	BHEL Engineer's decision shall be final and binding on the contractors regarding clarification of items in BOQ cum Rate schedule with respect to the other sections of the contract.
8	In case of any discrepancy between item description, relevant specification, clarification shall be sought at tender stage itself. Otherwise it shall be assumed that the contractor has quoted for the more stringent requirement.

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
A	Construction and maintenance of labour colony having adequate no. of rest rooms along with toilets & fencing etc. as per drawing attached and TCC including associated civil and structural works on built, own and operate basis. Proposal for construction of these hutment is to be got approved from BHEL before organizing material and execution. Payment towards construction/development of labour colony of 02 Sets as per drawing attached and as above shall be paid by BHEL. Payment shall be done for each set on set wise completion. The labour colony shall be handed over for accommodation with all amenities within Three (03) Months from date of start as per TCC.	Set	2	₹ 50,00,000.00	₹ 1,00,00,000.00	Fixed Price
100	EARTH WORK: Earth work In excavation, backfilling and disposal including all labour, equipments etc complete as per specification, drawing and as directed by engineer- in-charge for the following.					
101	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 1Km, spreading/levelling of disposed materials etc. all complete for following depths below ground level.					
a	Depth from ground level but not exceeding 2 m	CUM	1,03,324		₹ -	1.69411006
b	Depth exceeding 2 m but not exceeding 4 m	CUM	41,761		₹ -	0.85420178
c	Depth exceeding 4 m but not exceeding 6 m	CUM	6,798		₹ -	0.17436419
102	Extra over ST No. 101 for dewatering of ground water by well point method as per IS 9759.	CUM	6,798		₹ -	0.71565462
103	Earth work in excavation in soft rock including weathered rock which can be excavated by means of crow bar, pick axe, pneumatic rock breaker attachment with excavator machine etc but does not require chiselling or blasting including setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 1 Km, spreading / levelling of disposed materials etc. all complete for following depths below ground level.					
a	Depth from ground level but not exceeding 2 m	CUM	10		₹ -	0.00024351
b	Depth exceeding 2 m but not exceeding 4 m	CUM	20		₹ -	0.00058442
c	Depth exceeding 4 m but not exceeding 6 m	CUM	30		₹ -	0.00105195
d	Depth exceeding 6 m but not exceeding 8 m	CUM	100		₹ -	0.00420779
e	Depth exceeding 8 m but not exceeding 10 m	CUM	100		₹ -	0.00483896

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A107	Earthwork in Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 300mm compacted thickness using/with selected materials from compulsorily excavated earth available within a lead upto 1 Km and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following.					
a	at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	70,461		₹ -	1.08665441
109	Extra over ST No. 101 and 103 to 108 for carriage of material/earth for every 500m or part thereof beyond an initial lead of 1km.				₹ -	
b	Carriage for disposal of serviceable/ unserviceable material/ earth	CUM	81,422		₹ -	0.15861419
112	Extra over item no. 101 for shoring and strutting in trenches including packing cavities (wherever required as instructed by engineer) all complete as per specification and as directed by engineer in charge.					
a	upto depth of 2m	SQM	100		₹ -	0.00491883
b	Depth exceeding 2 m but not exceeding 4 m	SQM	100		₹ -	0.00615259
200	CONCRETE WORK: Transportation and placing concrete work including cost of labour, materials (unless otherwise specified in BOQ/contract specification) and equipment for handling, transportation, mixing, placing, vibrating and curing (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like transit mixer, concrete pump / boom placer etc. complete as per drawing, specifications and as per direction of engineer in charge for the following. Note: Ready Mix Concrete (RMC) shall be issued by BHEL free of cost at Batching Plant of BHEL's RMC Agency.					
A201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as mass filling course, lean concrete, levelling course, mud mat under and around foundations/floors below finished floor level upto depth of 10m from FGL .	CUM	5,946		₹ -	1.25314773
A202	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors below finished floor level upto depth of 10m from FGL .	CUM	20		₹ -	0.00421509
204	Concrete of grade M20 (1 part cement, 1.5 part sand, 3 parts of 10-20 mm graded aggregate by volume) under floors, paving, plinth protection, pipe encasing etc complete below finished floor level upto depth of 10m from FGL .	CUM	161		₹ -	0.03393151
A205	Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc. for any shape, position or thickness etc. all complete as per specification & drawing below finished ground level upto a depth of 10m from FGL , for the following.					
b	M 25 Grade	CUM	41,493		₹ -	8.74478355

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c	M 30 Grade	CUM	1,385		₹ -	0.29189533
A206	Design Mix cement concrete of grade conforming to IS:456 & IS:10262-2009 for reinforced concrete works with sand and graded hard stone aggregate of 20mm nominal size in superstructure for any shape, position or thickness etc. complete as per specification & drawing upto 10m level above finished ground level (For height greater than 10m from FGL, extra over for additional height to be paid in Item No 225) for the following.					
b	M 25 Grade	CUM	8,293		₹ -	1.94198207
c	M 30 Grade	CUM	180		₹ -	0.04215095
210	Extra over ST Nos. 205 to 207 for conducting UPV test for concrete at all levels including all equipments, making necessary arrangements, staging, submission of report etc. all complete as directed by engineer in charge and as per specification.	CUM	27			0.00305656
A212	Screed concrete conforming to IS 456 with sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof upto 10m level above finished ground level (For height greater than 10m from FGL , extra over for additional height to be paid in Item No 225) or thickness, drains etc complete as per following.				₹ -	
a	01:02:04	CUM	25		₹ -	0.00585430
213	Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transporting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent precast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.					
c	M30	CUM	1,218		₹ -	0.61579158
A213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works for boundary wall using graded aggregate for Concrete in precast works like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds , curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent precast units cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.					
a	M30	CUM	638		₹ -	0.32255749

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215	Dismantling concrete work for all types of structures at all levels including stacking of serviceable material to a lead of 500 m and disposal of unserviceable 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	7		₹ -	0.00152623
b	Reinforced cement concrete of all grades	CUM	31		₹ -	0.01034532
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.	CUDM	330		₹ -	0.00380549
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	23		₹ -	0.00002594
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.	CUDM	23		₹ -	0.00045959
222	Cutting of groove of 10mm X 40mm size with groove cutting machine in concrete paving all complete.	RM	100		₹ -	0.00102273
223	Cutting of existing concrete/ RCC work inside control room/ pump house or anywhere inside boundary using power tools of (DD2E of HILTI/ BOSCH make) with low noise and dust including cutting reinforcements, removing the rubbish within a lead of 1 km, including making good the broken edges/ surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/ supporting at any level, all complete and as directed by Engineer (measurements shall be taken as per cutting surface area).	SQM	10		₹ -	0.00425162
A225	Extra over item no. 206 and 212 for height above FGL (Finished ground Level) as per following:					
(a)	Height exceeding 10m from FGL but not exceeding 20m	CUM	30		₹ -	0.00166071
300	FORMWORK: Providing, fixing and removing formwork at all elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.				₹ -	

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301	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams & slabs(for which scaffolding work not required for vertical support of bottom face of formwork), mass concrete, trenches, grade slab, paving etc.including chamfering of edges as per drawing, specification and instruction of engineer in charge.					
a	Upto Depth 10m From FGL	SQM	2,36,562		₹ -	23.69458925
A301	Fairface form work with good quality water proof ply wood with Filmface of minimum 12mm thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams & slabs(for which scaffolding work not required for vertical support of bottom face of formwork), mass concrete, trenches, grade slab, paving etc.including chamfering of edges as per drawing, specification and instruction of engineer in charge.					
a	Upto Depth 10m From FGL	SQM	1,481		₹ -	0.15130714
302	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface above finished ground floor level for columns, beams, suspended/intermediate floors, roofs, lintels, cantilevers, staircases, landings, balconies, etc. including chamfering of edges as per drawing.for all heights as per specification, drawing and instruction of engineer in charge.					
a	For Height Upto 20m from FGL	SQM	10,309		₹ -	1.23507104
A302	Fairface form work with good quality water proof ply wood with Film face of minimum 12mm thickness and smooth surface above finished ground floor level for columns, beams, suspended/intermediate floors, roofs, lintels, cantilevers, staircases, landings, balconies, etc. including chamfering of edges as per drawing.for all heights as per specification, drawing and instruction of engineer in charge.					
a	For Height Upto 20m from FGL	SQM	5,384		₹ -	0.65793141
304	Providing, fixing and removing formwork in block-outs/pockets and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.					
a	Upto 150 mm depth	Each	10		₹ -	0.00038312
b	Pockets of depths more than 150mm and upto 300 mm depth	Each	10		₹ -	0.00064123
c	Pockets of depths more than 300mm and upto 600 mm depth	Each	10		₹ -	0.00114286
d	Pockets of depths more than 600mm and upto 1000 mm depth	Each	10		₹ -	0.00178896
e	Pockets of depths more than 1000mm and upto 1500 mm depth	Each	5		₹ -	0.00128896
f	Pockets of depths more than 1500mm and upto 2000 mm depth	Each	2		₹ -	0.00068052
305	Extra over item no.301 and 302 for curved form work for foundations, footings, beams, walls, trenches, domes, arches etc as per specification.					

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a	Extra for Curve Shuttering for Item No. 301/ A301	SQM	100		₹ -	0.00199675
b	Extra for Curve Shuttering for Item No. 302/ A302	SQM	100		₹ -	0.00238636
400	REINFORCEMENT WORK : Reinforcement work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge.					
401	Providing, straightening, cutting, bending, placing in position at any level, binding of mild steel reinforcements conforming to grade 1 of IS:432 part 1 in concrete including cost of reinforcement and binding wire, labour, scaffolding, transportation to & from stores etc. all complete as per specifications & drawings. Note: Supply of mild steel reinforcement is in contractor's scope.	MT	2		₹ -	0.02728440
403	Transportation, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500D/Fe-550D or 500EQR or HCRM or any other Grade confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. Note: Reinforcement Steel shall be issued by BHEL free of cost.	MT	5,321		₹ -	9.35694120
405	Providing & fixing of Rebar in existing concrete surface by inserting reinforcement bar with Epoxy based suitable bonding compound of Hilti or equivalent make (HIT-RE-500 of Hilti or equivalent make) for interconnection of new R.C. structure with existing R.C. structure. Depth of drilled hole should be suitable to develop maximum recommended strength as per approved manufacturer's recommendation. This item includes supply of all materials including bonding chemicals, T&P required to execute the work, cost of all labour, transportation of chemical, staging to reach work place etc. all complete as directed by Engineer - in - Charge. Random Pull out non destructive test as directed by engineer shall be conducted to ensure strength of bond and same is included in this item. Note: Reinforcement Steel shall be issued by BHEL free of cost.				₹ -	
a	12mm Reinforcement bar	Nos.	5		₹ -	0.00030925
b	16mm Reinforcement bar	Nos.	5		₹ -	0.00048133
c	20mm Reinforcement bar	Nos.	5		₹ -	0.00066721
Ad	25mm Reinforcement bar	Nos.	5		₹ -	0.00083401

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A406	Providing and fixing parallel threaded reinforcement couplers for mechanical splices of rebars (TMT/ CRS TMT) for concrete reinforcement including supply of couplers as per IS: 16172 made out of EN8D grade high strength alloy material , threading on rebars to be coupled with coupler, enlargement at connection by forging, protecting the prepared reinforcement bars, fitting & fixing of couplers under specialized supervision, quality tests & checks (for couplers and coupled joints) etc. all complete as per direction of Engineer in charge. The couplers shall match to the properties of rebars of grade equal to Fe-500D/Fe-550D of IS 1786. The cost shall include for all works and tests including mobilisation, demobilisation, loading/unloading of required plant/ machinery at site for threading & forging works, tools & tackles, labour & supervision, consumables and all incidental expenses for satisfactory execution of the work . (No deduction for labour and binding wire saved for not providing lap length shall b to be u					
c	Coupler of class "H" for 25 mm diameter reinforcement bar.	Nos.	50		₹ -	0.00086851
d	Coupler of class "H" for 28 mm diameter reinforcement bar.	Nos.	50		₹ -	0.00112013
e	Coupler of class "H" for 32 mm diameter reinforcement bar.	Nos.	50		₹ -	0.00141234
f	Coupler of class "H" for 36 mm diameter reinforcement bar.	Nos.	50		₹ -	0.00174513
407	Transportation from BHEL yard, straightening, cutting, bending, welding / binding in position of old cut piece TMT steel reinforcements confirming to IS:1786 including binding wire, labour for placing in concrete, chair and other misc. works complete all as per bar bending schedule and as directed by Engineer. [Old cut piece TMT Reinforcement steel will be issue by BHEL Store free of cost]	MT	1		₹ -	0.00196428
A408	Straightening, cutting, bending of TMT steel reinforcement (Grade Fe-500D/Fe-550D or 500EQR or any other Grade) of already fixed/embedded TMT in concrete binding in position including cost of binding wire, labour, scaffolding, etc complete all as per specifications, drawings and as directed by Engineer.[Measurement for payment shall be done for the exposed steel used in concreting. Additional/new TMT Reinforcement steel used in this item will be paid separately in the relevant Item No 401-403]	MT	1		₹ -	0.00041136
500	Roof Treatment works: Roof treatment works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, curing, sampling, testing etc at all level as per specification, drawings and as directed by engineer - in - charge.				₹ -	
501	Providing and laying underbed/topping grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 25 mm including preparation of surface, batching, mixing, levelling etc. all complete.	SQM	987		₹ -	0.04117839

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A506	Providing and applying PU based high solid content (minimum 90%) of approved make water proofing treatment with one coat of polyurethane or any other equivalent material based primer with an application rate of minimum 6 sq.m per litre and two successive liquid coatings of high solids content urethane pre-polymers or equivalent material based finish coats as per relevant IS/ASTM standards to form an elastomeric membrane with overall dry film thickness 1.5 mm subject to minimum 500 gm/sqm/coat application rate. Item includes surface preparation. The coating shall have high viscosity, min. 400% elongation and forming a perfectly smooth permanently flexible seamless membrane which should have good adhesion to roof substrates. The cured film should have a very low water absorption rate (0.5% maximum at ambient temperature after 7 days), reinforcing layer of polyscrim cloth (non woven polyscrim cloth of 100% polyester with min. weight of 40gsm/sqm) or geo-textile non woven polyester (120-150 gsm), polymerised mastic base preparation, primer, making of fillets, cleaning & preparation of surface, vacuum removal of loose sand, expansion joints & sealing at suitable intervals, application by using a pneumatic machine as per manufactures recommendations, etc. all complete as per specifications, drawings and direction of engineer in charge. The application of waterproofing treatment shall be carried by authorised applicator of approved Manufacturer of Waterproofing materials.	SQM	987		₹ -	0.16556114
A507	Providing and laying wearing course consisting of 20 mm thick plain cement mortar 1:4 (1 cement : 4 sand) cast in panels of maximum size 1.2mx1.2m and reinforced with 0.56 mm dia. galvanised chicken wire mesh and sealing of joints (in grooves of 6mm X 6mm) using silicon /elastomeric compound etc all complete.	SQM	987		₹ -	0.05357676
A510	Providing and laying cement concrete chequered roof / floor tiles of 22 mm thickness and size min. 200x200 mm conforming to IS 13801 with 8 mm thick 1:4 cement mortar over the top most layer of roofing treatment in pathway or entire area with fine joints including sealing of joints (silicon/elastomeric sealant) and providing expansion gap in both directions including underbed (as per drawings) filled up with (silicon/elastomeric) joint sealant etc. all complete. Note: 1. Water proofing to be paid elsewhere. 2. Cement for tiles making is in contractor's scope.	SQM	99		₹ -	0.01176068
A511	Providing and applying two coats of bitumen paint of minimum 150 micron DFT with suitable primer, conforming to IS 9862 with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces including surface preparation etc. all complete.	SQM	3,806		₹ -	0.10451775
513	Providing and mixing water proofing compound conforming to IS:2645 in concrete or cement mortar all complete.	KG	5		₹ -	0.00007062

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ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE / (QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
A514	Providing and applying two component transparent polyamide cured epoxy sealer coating (having solid by volume minimum 40% \pm 2%) of minimum 50 micron DFT followed by epoxy phenolic coating (solid by volume minimum 63%) of minimum 400 micron DFT. This coat shall be applied after an interval of minimum 24 hours (from the application of primer coat) by airless spray technique on beams, wall, column, slab, basin floor, basin wall, fill supporting beams and columns, internal surfaces of fan stack, underside of fan deck roof slab etc on concrete surfaces as per IS 9862 and IS 3384 complete all as per specifications & drawings.	SQM	170		₹ -	0.01826533
B514	Providing and applying Food grade epoxy coating complying to FDA Tittle 21, Part 175.300 of minimum 400 micron DFT over absolutely dry, clean and dust free surface of water retaining structures storing drinking water. This coat shall be applied by airless spray technique and shall conform to as per IS 9862 ,complete as per specifications & drawings.	SQM	20		₹ -	0.00244299
A 517	Providing and laying Cinder / foam concrete blocks in the toilets, pantry,sunken slab etc. after water proofing and laying of plumbing pipes complete as directed by engineer in charge.	CUM	10		₹ -	0.00352967
A518	Providing and laying water proofing treatment for wet areas like toilets,kitchen,pantry for sunken slab etc.material with min.two coats of Acrylic Polymer Modified Flexible Cementitious Waterproofing Coating material like Danocrete I-protect flex or equivalent make applied @ 0.70 to 0.8 0 Kg/m2 per coat .The First layer shall be of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.The Second layer shall be of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm.The waterproofing coat applied (confirming to IS 2645) , while maintaining a gap of 4 to 8 hours between the coats all complete with water ponding test as per IS Code and as directed by engineer in charge	SQM	60		₹ -	0.00643480
A519	Providing and laying an angular fillet around parapet wall junction at roof level of minimum 50mm x 50mm, shall be trowel applied in cement-sand mortar in 1:3 proportion. A latex based bonding agent should be added (10% by weight of cement) and also a glass cloth must be inserted while the angle fillet is being constructed.	RM	20		₹ -	0.00198091
600	JOINTS AND FILLERS: Joints & fillers including all labour, material, equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge.					
601	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumen etc. all complete.					
a	12 mm wide joints.	SQM	10		₹ -	0.00102922
b	20 mm wide joints.	SQM	10		₹ -	0.00124188
c	25 mm wide joints	SQM	150		₹ -	0.02727271
d	50 mm wide joints	SQM	50		₹ -	0.01909090

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE / (QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
A601	Supplying & installation of engineering grade polystyrene foam backer rod (circular cross section) at 12 mm depth with minimum density of 22 kg/cum and compressive strength of 0.40 kg/sqm having dia. 25% more than the expansion joint width as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumen etc. all complete.					
a	12 mm wide joints.	SQM	10		₹ -	0.00133029
b	20 mm wide joints.	SQM	10		₹ -	0.00185877
c	25 mm wide joints	SQM	34		₹ -	0.00833535
d	50 mm wide joints	SQM	50		₹ -	0.01884139
602	Supplying and installation of Dura board HD100 or its equivalent as approved by the Engineer, as filler material in joints including nailing, installation as per manufacturer's recommendation etc. all complete.					
c	25 mm wide joints	SQM	20		₹ -	0.00355844
A602	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves:					
a	12mm X 25mm	RM	10		₹ -	0.00050493
b	20mmX25mm	RM	10		₹ -	0.00084156
c	25mmX25mm	RM	10		₹ -	0.00105195
d	50mmX25mm	RM	10		₹ -	0.00199838
603	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves (10 mm thick backer rod to be paid separately):					
a	25mmX25mm groove size	RM	10		₹ -	0.00105195
b	50mmX25mm groove size	RM	10		₹ -	0.00199838
c	20mmX25mm groove size	RM	10		₹ -	0.00084156
604	Supplying and filling in position hot applied bitumen sealing compound (Grade A) 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	20		₹ -	0.00021429
b	12mm X 25mm	RM	200		₹ -	0.00185065
c	20mmX25mm	RM	400		₹ -	0.00493506
A605	Supply and installation of Polystyrene flexible board confirming to IS 4671 (type-1), 20 Kg/ Cum. as joint filler at joint of concrete including nailing, coating of both faces with coal tar pitch / bitumen etc. all complete.					
b)	50mm thick	SQM	5		₹ -	0.00088771
610	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following: (Bulb or Kicker type)					
d	230 mm wide and 6 mm thick	RM	60		₹ -	0.00347727
615	Providing and fixing 300 mm wide Stainless steel strips over expansion joints with minimum lap of 50mm length including stainless steel screws, rawl plugs etc. all complete.	Kg				

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
A615	Providing and fixing 300 mm wide Stainless steel strips (316 GRADE) over expansion joints with minimum lap of 50mm length including stainless steel screws, rawl plugs etc. all complete	Kg	15		₹ -	0.00163393
700	MS EMBEDMENTS: Embedments including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge.					
701	Supply, 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.	MT	200		₹ -	3.40051752
A701	Supply, 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. Steel surfaces shall be prepared by Manual Cleaning and provided with Chlorinated Rubber based paint with Primer Coat of Zinc Phosphate of Minimum 50 Micron Dry Film Thickness (DFT). etc. all complete as per specification.	MT	93		₹ -	1.60345646
702	Supply, Fabrication, transportation, delivery at site 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, stiffener plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete.	MT	1		₹ -	0.02122353
703	Same as above items 701 & 702 with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.				₹ -	
A	Mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc.	MT	10		₹ -	0.04203894
B	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, stiffener plates, protective tape, pipe sleeves, templates etc.	MT	10		₹ -	0.04092368
704	Supplying, 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.				₹ -	
c	UPVC pipes / conduits of all diameters	kg	100		₹ -	0.00780844
Ad	Providing and fixing carbon steel galvanized (minimum coating 5 micron) anchor fastener (Hilti HRD) of double threaded 6.8 grade (yield strength 480 N/mm2) or equivalent for brick work with two part expansion polyamide A6 grade sleeve.				₹ -	
i	8mm Dia	Nos	10		₹ -	0.00039610
ii	10mm Dia	Nos	10		₹ -	0.00040422
iii	12mm Dia	Nos	10		₹ -	0.00040422
iv	14mm Dia	Nos	10		₹ -	0.00040422
Ae	Mechanical expansion fasteners, cold formed stud type having 3 way expansion sleeve of SS 316 grade approved for use in cracked concrete and seismic design with ETA C1/C2 approval or equivalent as specified below for concrete work.				₹ -	
i	HST3 M8	Nos	10		₹ -	0.00034740
ii	HST3 M10	Nos	10		₹ -	0.00051299

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ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE / (QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
iii	HST3 M12	Nos	10		₹ -	0.00075974
iv	HST3 M16	Nos	10		₹ -	0.00145292
v	HST3 M20	Nos	10		₹ -	0.00287013
vi	HST3 M24	Nos	10		₹ -	0.00566883
f	Chemical Expansion fasteners (galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with anchoring rod,nuts,washers,chemicals all complete,etc:				₹ -	
i	HAS-E5.8 M8	Nos	10		₹ -	0.00072078
ii	HAS-E5.8 M10	Nos	10		₹ -	0.00091883
iii	HAS-E5.8 M12	Nos	10		₹ -	0.00114935
iv	HAS-E5.8 M16	Nos	10		₹ -	0.00188636
v	HAS-E5.8 M20	Nos	10		₹ -	0.00302435
vi	HAS-E5.8 M24	Nos	10		₹ -	0.00400324
Af	Adhesive type Chemical anchor fastener consisting of slow curing epoxy chemical adhesive and threaded rod of carbon steel (minimum grade of 5.8) including nut and washer usable in diamond core drilled holes and in wet/ water submerged holes dispensed through mechanical dispenser HIT RE 500 V3 or equivalent of safe tensile capacity as specified below for concrete work.				₹ -	
i	HIT-V M8	Nos	10		₹ -	0.00090909
ii	HIT-V M10	Nos	10		₹ -	0.00106980
iii	HIT-V M12	Nos	10		₹ -	0.00165260
iv	HIT-V M16	Nos	10		₹ -	0.00257305
v	HIT-V M20	Nos	10		₹ -	0.00464935
vi	HIT-V M24	Nos	10		₹ -	0.00645454
800	GROUTING: Grouting including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, roughening surface, cleaning, ramming, curing etc. at all level, drawings and as directed by engineer - in - charge.				₹ -	-
801	Providing & grouting with cement slurry mix of approved ratio using pressure pump for water retaining concrete structures as per approved procedure including cost of nipples/ nozzles, cement, admixture, curing, pressure pumps, slurry agitator etc. all complete. Cost shall include fixing of nipples at maximum 500 mm centre to centre spacing, cutting of nipples after completing of grouting, making good of the nipple hole with appropriate non-shrink cement paste, water tightness test etc. all complete wherever specified in the drawing.	SQM	10		₹ -	0.0012029
804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with Conbextra GP-1 or equivalent as per specification, drawing and direction of engineer-in-charge. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	3		₹ -	0.0256441

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
900	DOORS & WINDOWS: Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, preparation of working drawings etc. at all level as per specification, drawings and as directed by engineer - in - charge.				₹ -	-
A903	<p>Providing, fitting and fixing solid core flush door shutter as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldehyde synthetic resin, partical 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.</p> <p>Note: 1. All particle board shall have recycled content. The bidder is required to provide material cutsheet sample/ declaration from manufacturer mentioning the percentage of recycled content used in manufacturing of particle board to the engineer in charge 2. Finish painting paid separately</p>	SQM	2		₹ -	0.0024000
A904	Providing and fixing single or double steel door shutters with 35mm (min) 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.	SQM	38		₹ -	0.0851422
A905	Providing and fixing electrically operated, self operable/closing 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. Weight of aluminium section only shall be measured. (Glazing shall be paid separately)	SQM	32		₹ -	0.0822655

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

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ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
A906	Providing 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 8/10 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)	KG	310		₹ -	0.0262191
907	Providing and fixing fire proof steel doors (single or double shutter) with vision panel, panic devices shall be 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, NBC 2016 & TAC requirements and as per specification. Vision panel shall be provided with interlayered fire rated glass. Minimum ratings shall be 2 Hrs.	SQM	10		₹ -	0.0192094
B907	Providing and fixing automatically closing fire proof steel flush doors along with frame of minimum 44mm thk flush shutter 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 center to center of approved make conforming to IS : 3614 (part 1) & tested to IS/ISO 3008,satisfying LPA regulations and shall carry a unique label with certification/test report number,fire rating embossment, fixed at all elevations, with or without removable panels,with panic bar,panic trim with following fire rating using galvanised MS sheets for frames conforming to IS 277, made out of minimum 1.6mm (16 SWG) for both frame and shutter, G.I. sheet (min.zinc coating 120 gsm), and leaves, mineral wool / PUF/ any other fire retardant insulation material filled with required density, mastic caulking and grouting the frame, reinforcing and insulating the shutters with fire retardant material, with panic devices, including all fittings, fire rated vision glass, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (min.64 kg/cum density) complete and shall be fire proof as per IS:3614, LPA requirements and as per specification.Shop drawings shall be submitted by the fabricator/manufacturer for approval before execution Minimum ratings shall be 2 Hrs. All hardware fittings shall be fire rated.	SQM	5		₹ -	0.0141525

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

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ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
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	10		₹ -	0.0046916
b	fixed type	SQM	10		₹ -	0.0029724
A908	Providing and fixing M.S. grills in windows/ventilator as per approved design for security purpose made of M.S. Flats / M.S. square bar of approved design shall be provided to suit security requirements.	kg	10		₹ -	0.0003565
B908	Providing and fixing anodised aluminium Grills in windows/ventilator of approved design.	kg	10		₹ -	0.0012094
909	Providing and fixing anodised aluminium work of Jindal, Hindalco or other equivalent approved make for door frames, windows, ventilators, partitions, railing etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-metallic protection etc. including preparation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/panelling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stainless steel screws, providing and fixing hinges/pivots, and making provision foL and shall be paid under ST No 2301)e % of recycled content. Mineral wool insulation to be paid separately. st office/signal red color fire resistant paint and mineral wool insulation (min.64 kg/cum density) complete and shall be fire proof as per IS:3614,	Kg			₹ -	-
A909	Providing and fixing anodised aluminium work of INDAL, Jindal, Hindalco or other equivalent approved make for door frames, windows, ventilators, partitions, railing etc with extruded standard tubular and other sections(of minimum 2mm wall thickness) including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-metallic protection etc. including preparation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/panelling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stainless steel screws, providing and fixing material, with panic devices, including all fittings, fire rated vision glass, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (min.64 kg/cum density) complete and shall be fire proof as per IS:3614, LPA requirements and as per specif	Kg	1,633		₹ -	0.1975519
911	Providing and fixing of door closers as per IS 3564 ,of approved make & quality all complete of following type :					-

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a	Over head hydraulic door closures	Each	4		₹ -	0.0013383
b	Floor mounted Hydraulic door closers	Each	4		₹ -	0.0029390
A912	Providing and fixing pressed steel frames(complying general requirements of IS 4531) fabricated from 1.2 mm thick 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	334		₹ -	0.0099224
B912	Providing and fixing pressed steel door frames for fire proof doors. Door frame shall be double rebate profile of size 143 x 57 mm made out of 1.60 mm (16 gauge) minimum thick galvanized steel sheet 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	15		₹ -	0.0005347
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		₹ -	0.0048588
A914	Providing and fixing Solid core PVC doors (25 thk double skin) with PVC frame of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	10		₹ -	0.0048588
915	Providing, 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.					-
d	6 mm thick wired glass	SQM	162		₹ -	0.0507039
g	6 mm thick tinted heat reflecting type float glass	SQM	12		₹ -	0.0044026
h (a)	6 mm thick clear reflective toughened safety glass of Saint Gobain(India) or Asahi (India) or equivalent make and should have solar factor 25% or less, Maximum U-value 3.3W/SQMK, VLT min 30%, light reflection internal 10 to 15%, light reflection external 10 to 20%, shading coefficient (0.25-0.28)	SQM	31		₹ -	0.0151337
AhB	8 mm thick clear toughened glass	SQM	17		₹ -	0.0082489
m	6 mm thick clear toughened safety glass	SQM	10		₹ -	0.0036688
916	Supplying and fixing weather stripping of approved make and quality to doors as per instructions of engineer in charge and specification complete.	RM	10		₹ -	0.0005032
918	Providing and fixing steel louvered window with ISMC 100 frame all round including verticals with 18G pressed steel louvers, painting etc. all complete.	SQM	5		₹ -	0.0033247
1000	BRICKWORK: Brickwork masonry including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge. Note: Cement for mortar shall be issued by BHEL free of cost.					-

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
A1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm upto 10m level above finished ground level (For height greater than 10m from FGL , extra over for additional height to be paid in Item No 1014), places and position above plinth including raking out joints, curing, scaffolding etc complete but excluding plastering and painting.					-
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	CUM	351		₹ -	0.4304306
A1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls, chambers etc. in thickness 115mm upto 10m above finished ground level (For height greater than 10m from FGL , extra over for additional height to be paid in Item No 1015), 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. (Reinforcement payment shall be made separately as per applicable BOQ in 400 Series)					-
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	SQM	214		₹ -	0.0322042
1005	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	5		₹ -	0.0014507
A1012	Providing Autoclaved Aerated Concrete (AAC) block masonry with blocks having dimensions of 625 mm x 250 mm. thickness ranging from 100 mm to 300 mm conforming to IS 2185(part-III) .The jointing cement sand mortar in the composition of 1: 6 (Cement: sand) shall be used with suitable plasticizer(optional). Sand having modulus of fineness 1.1 shall be used. The horizontal and vertical joint thickness shall be approximately 10 mm. In case of partition walls (100 mm /125 mm thick) the joint reinforcement i.e. 1 number of 6-8 mm diameter bars shall be placed at every alternate course to be anchored properly with the main structure. All other structural requirements like stiffening of masonry, joint reinforcement etc. in the AAC masonry work strictly be carried out as per instructions laid down in IS 6041, IS 1905 etc all complete as per specification. Note: Reinforcement to be paid separately.	CUM	150		₹ -	0.1554788
A1014	Extra over item no. A1002, 1006, A1012 & A1013 for height above FGL (Finished Ground Level) as per following:					-
a	Height exceeding 10m from FGL but not exceeding 20m	CUM	75		₹ -	0.0090584
A1015	Extra over item no. A1003 for height above FGL (Finished Floor Level) as per following:					-
a	Height exceeding 10m from FGL but not exceeding 20m	SQM	20		₹ -	0.0001851

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
1100	DAMP PROOF COURSE: Damp proof course including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, shuttering, centering, curing etc at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost.					-
1101	Providing Damp Proof Course of following thickness with 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound all complete. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7Kg/sqm shall be applied one before & one after the DPC.					-
b	50mm thick	SQM	62		₹ -	0.0033516
1200	PLASTERING: Cement mortar plaster including making grooves wherever required including all labour, material (unless otherwise specified in BOQ/contract specification), scaffolding, curing etc at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost.					-
A1201	Providing 18mm thick plaster in two layers outside the building/boundary wall/rough surface of internal wall in cement mortar 1:6 on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete.	SQM	2,156		₹ -	0.1182725
1202	Providing 12mm thick plaster internal/external surfaces of building/boundary wall in cement mortar as applicable above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1206) on walls finished to a smooth finish as per specification all complete.					-
a	Cement Mortar 1:6	SQM	3,470		₹ -	0.1538017
1204	Providing 6mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth all complete.	SQM	1,794		₹ -	0.0684285
1207	Forming groove of uniform size from 12X12 mm upto 25X15 mm in plastered surface as per approved pattern, using wooden battens nailed to the under layer, including removal of wooden batons, repair of the edges of plaster panel and finishing the groove etc. complete as per specification, drawing and the instructions of engineer in charge.	RM	50		₹ -	0.0002922
1209	Ruled pointing in masonry in Cement Mortar 1:3 (1 cement and 3 fine sand) including raking out joints, curing etc. complete.	SQM	40		₹ -	0.0011753
1210	Providing drip course in cement mortar(1:4) in parapet, chajjas, window /door heads, architectural facias, fins,etc all complete with all labour, T&Ps as per specification, drawing and instruction of engineer in charge .	RM	70		₹ -	0.0003409
A1210	Providing mouldings and cornices on plastered surface at all elevations for all type of work such as chajjas, parapet, projections etc. including scaffolding, finishing etc. complete with all labour, tools and plants as per specification, drawing and instructions of engineer in charge.	RM	100		₹ -	0.0014912

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE / (QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
1300	FINISHES TO CONCRETE / PLASTERED SURFACES: Finishes, painting to concrete, plastered surfaces including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, surface preparation, scaffolding etc. at all level as per specification, drawings and as directed by engineer - in - charge.					-
A1304	Two or more coats of Low VOC (volatile organic compound) acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete. All necessary documentation (certificates, manufacturer declarations) should be provided by the contractor to engineer in charge	SQM	5,771		₹ -	0.0886885
1312	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	10		₹ -	0.0001981
A1317	Providing and applying 2 mm thick Acrylic wall putty punning on walls including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	5,194		₹ -	0.1277014
A1319	Providing and applying two or more coats of Premium Acrylic Smooth Paint with Silicone additives 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	2,511		₹ -	0.0698351
1400	FLOORING AND SKIRTING: Flooring and skirting at all level including base layer, labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, curing, polishing etc. at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement for fixing mortar / underbed shall be issued by BHEL free of cost.					-
A1416	Providing and laying vitrified ceramic tiles of polished variety of size 600x600 with Matt/ Glazed from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 average 40mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm etc. all complete for following					-
a	10mm thick tiles In flooring	SQM	10		₹ -	0.0020179
b	7mm thick tiles In skirting and dado upto specific height	SQM	5		₹ -	0.0008904

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE / (QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
D1416	Providing and laying matt finish vitrified ceramic tiles of polished variety of size 600x600 / 800x800 of approved shade, colour, pattern and make from reputed / approved manufacturer as Simpolo,Endura,Varmora or equivalent , complete including underbed of average 40 mm thick cement concrete mix 1:1.5:3 (1 cement: 1.5 sand : 3 stone aggregates 12.5mm well graded) with 3mm groove joints as per approved pattern pointed neatly with 3X4mm stainless epoxy grout SP- 100 of Laticrete, Luxtore or approved equivalent in approved colour to match colour of tile etc. all complete for following.					-
a	9.0 mm (min.) thick tiles In flooring	SQM	196		₹ -	0.0467829
A1418	Providing and laying 10 mm thk non-skid fully vitrified tiles of approved manufacturer simpolo, varmora 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, cement slurry 3.3kg/sqm complete as per specification laid in pattern of following					-
a	400X400 mm	SQM	96		₹ -	0.0173766
b	600X600 mm	SQM	1,395		₹ -	0.2765088
1419	Providing and laying granite stone slab of 20mm thickness single piece for wash basin / sink slab /facia of black or approved colour including 20mm underbed of cement mortar 1:3 with cutting,making corners,moulding and opening etc. all complete.	SQM	10		₹ -	0.0088019
A1421	Providing and laying Heavy Duty anti skid (grade-5) Ceramic Tiles (Matt Finish) of size 600x600mm(approved size) , vitrified tiles min.7mm thick on floor, skirting and dado of reputed / approved manufacturer Simpolo,varmora or equivalent of approved finish, shade and colour. The tiles shall be scratch resistance of minimum 5 on Mohr's scale and shall have a bending strength of 350 Kg./sqm,with Under bed shall average 43mm thk of 1 cement : 3 sand by volume and brought to proper level including cement mortar,12mm thick underbed for dado / skirting with neat cement slurry @3.3Kg/sqm etc. all complete.	SQM	20		₹ -	0.0046243
A1427	Providing and fixing Designer digitally glazed ceramic tiles of approved color and design as per IS: 15622 of size 300x300mm / 300x450mm, 300X600 of reputed / approved manufacturer Simpolo,varmora or equivalent of approved finish,size in dado, projecting 6mm uniformly from adjacent plaster or wall finish. The mix for 20mm thick underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry @ 3.3kg/sqm including pigments, curing etc all complete as instructed by engineer incharge for following thicknesses,.					-
a	5mm thick	SQM	50		₹ -	0.0077261
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 6 mm thick.	RM	20		₹ -	0.0003019
b	Aluminium strips 40 mm wide and minimum 3 mm thick	RM	200		₹ -	0.0050649
c	Brass strips 20 mm wide and minimum 4 mm thick.	RM	20		₹ -	0.0014708

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE / (QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
1500	ROOFING / SIDE CLADDING: Roofing / side cladding work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at all level as per specification, drawings and as directed by engineer - in - charge.					-
1511	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.					-
b)	For underdeck insulation below RCC slabs	SQM	10		₹ -	0.0017630
1514	Providing and installing under deck insulation with resin bonded rock wool 50 mm nominal thickness conforming to IS 8183 having a density of 48kg/cum using minimum 0.05 mm thick aluminium foil on exposed surface followed by 0.56 mm dia and 25 mm mesh GI wire netting, fixed at various elevations with rawl plugs including clips, etc complete as per specifications.	SQM	125		₹ -	0.0182224
1517	Providing and fixing 1 mm thick corrugated/semicorrugated G.I. sheet in roofs, cladding of minimum galvanisation of 275 gsm total on both sides with minimum 150mm overlapping, 8 dia G.I. hook bolts or 'J' Bolts and nuts @305 mm c/c along with G.I. and bitumen washers including cutting of sheets for opening etc. all complete.	SQM	10		₹ -	0.0024156
1600	FALSE CEILING: False ceiling including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, suspension system, trap doors etc at all level as per specification, drawings and as directed by engineer - in - charge.					-
A1602	Providing, fixing and laying light weight mineral fiber tile false ceiling of minimum thickness 15 mm and exposed surface semi-perforated with depth of perforation as 4 mm and humid resistance of 95% RH and fire performance of class 0/1 as per BS 476 with metal suspension grid system with galvanized Tees of section 24 X 38 mm for main runners of approved colour and make as per specification including 50mm thick mineral wool insulation (density48kg/cum) 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 @ 1.2m) grid shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. complete with cut-outs etc. The size of tiles shall be 600 X 600 mm or 600 X 1200 mm. Required M.S. channel shall be measured & paid extra under respective item unit rate.(All mineral fiber board to be used should be with appropriate % of recycled content. Mineral wool insulation to be paid separately.	SQM	250		₹ -	0.0740369

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
A1603	Providing and fixing permanently colour coated aluminium false ceiling of approved colour of Luxalon Hunter douglas, or approved equivalent with corrosion resistant aluminium alloy panels of size 600 mm x 600 mm and 0.6 mm thk. with clip on torsion spring system ,perforation patterns in combination with built-in non-woven tissue, acoustic fleece for providing good acoustic properties and installed with silhouette T-Grid (of profile 24 mm) in same or contrasting colours or with 6 mm recess joints. The whole system shall be level adjusting arrangement and shall be suspended as per manufacturer. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures, A.C. ducts etc all complete. Suitable M.S. channel grid with minimum MC 75 shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Materials for structural platform grid made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)	SQM	250		₹ -	0.1397524
1700	RAIN WATER DOWN TAKE PIPES: Rain water down take pipes at all level including all labour, material (unless otherwise specified in BOQ/contract specification), transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc as per specification, drawings and as directed by engineer - in - charge.				₹ -	-
A1704	Providing and fixing galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I)with welded joints and provided with roof drain heads and complete with shoes bends, junctions, sockets, adapters, brackets and finished with anti corrosive painting over a coat or primer all complete. Galvanising shall be as per IS: 4736. The minimum mass of zinc coating shall not be less than 360 gms/sq.m. as per IS:6745. The zinc coating shall be smooth and shall be subjected to testing as per IS: 2633, for uniformity of coating. The zinc coating shall be free from all defects as per IS: 2629.	RM	431		₹ -	0.1230441
1800	MISCELLANEOUS: Miscellaneous works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.					-
A1801	Providing and Filling in trenches, plinths, area paving, grade slab and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 200 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	396		₹ -	0.1318499
A1804	Providing and fixing weep holes in drains consisting of 75 mm dia HDPE pipe sleeves including sand (250sq x 150 mm thick), aggregates (250sq x 150 mm thick), 200mm dia geo-textiles (pasted on concrete surface) etc. all complete as per specifications, drawings and guided by engineer-in-charge. (item is inclusive the cost of materials like HDPE pipe, sand, aggregates, etc.).	EACH	21,200		₹ -	0.6675931

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

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A1821	Sprinkling of water by water tanker fitted with perforated GI pipe (portable tanker minimum 3000 litre capacity) for roads and miscellaneous area within plant boundary, for dust suppression and reduction of suspended material at site for day to day work, as directed by BHEL site engineer (water for this purpose shall be arranged by contractor at his own cost and utilisation of machine will be in terms of Tank-hour put in actual use for water sprinkling).	TANK-HR	1350		₹ -	0.1488067
1822	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	2		₹ -	0.0046734
1823	Providing and laying cinder filling in the toilets,roads,etc complete as directed by engineer in charge.	CUM	5		₹ -	0.0017224
1851	Providing and fixing G.I strips minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete.	Kg	10		₹ -	0.0003354
1852	Providing and fixing aluminium strips minimum 18 SWG thk and 300mm wide over expansion joints with minimum lap of 50mm length including brass / aluminium screws, rawl plugs etc. all complete.	Kg	10		₹ -	0.0007034
2000	FENCING AND GATES: Fencing and gates including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc at all level as per specification, drawings and as directed by engineer - in - charge.					-
2006	Supplying and fixing 600mm high concertina on top of boundary wall including GI tension wires, clips, anchors, accessories etc. all complete. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners. (Structural post shall be separately under ST No. 2007)	RM	1,200		₹ -	0.0701298
A2008	Supply, fabrication and fixing of mild steel posts for fencing including painting with chlorinated rubber paint over a suitable primer etc all complete.	MT	6		₹ -	0.1050253
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 stiffeners, 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	8		₹ -	0.1703350
2100	WATER SUPPLY: Water supply work including men, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level as per specification, drawings and as directed by engineer - in - charge.				₹ -	-
A2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks with flow rate less than 5 LPM (litres per minute) at 45 psi, including sockets, union, nuts etc all complete -15mm nominal bore.(Note: Flow rate of all faucets at 45 psi should be less than 5 lpm. The contractor should submit the cutsheets/ declaration from the manufacturers mentioning the same to Engineer in charge.)	NOS	5		₹ -	0.0006286

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2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	NOS	5		₹ -	0.0007573
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.	NOS	5		₹ -	0.0008831
b	50mm nominal bore.	NOS	5		₹ -	0.0012622
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	10		₹ -	0.0009562
b	20 mm nominal bore.	RM	10		₹ -	0.0011136
c	25 mm nominal bore.	RM	10		₹ -	0.0012289
d	50 mm nominal bore.	RM	5		₹ -	0.0008206
A2104	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, confirming to IS 15778, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings shall be concealed, complete for internal works with 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	100		₹ -	0.0041558
b	20 mm nominal bore.	RM	100		₹ -	0.0053247
c	25 mm nominal bore.	RM	100		₹ -	0.0098052
d	50 mm nominal bore.	RM	75		₹ -	0.0133928
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	10		₹ -	0.0007890
b	20 mm nominal bore.	RM	10		₹ -	0.0009481
c	25 mm nominal bore.	RM	150		₹ -	0.0159253
d	50 mm nominal bore.	RM	150		₹ -	0.0221104
A2106	Providing and fixing 600mm x 900mm x 6mm thk mirror from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws , edge mounting with teak beading and minimum 12 mm thick plywood backing etc all complete.	EACH	10		₹ -	0.0029383
2107	Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete.	NOS	10		₹ -	0.0015909
2108	Providing and fixing 25 mm diameter stainless steel towel rails (600mm X 25mm) with C.P. mounting brackets all complete.	NOS	10		₹ -	0.0021282
2110	Providing and fixing C.P. Soap holder mounted with C.P. screws etc all complete.	NOS	10		₹ -	0.0016964
2111	Providing and fixing stainless steel / C.P. liquid soap dispenser. Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete.	NOS	10		₹ -	0.0016234
2112	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. all complete.	NOS	10		₹ -	0.0017435

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
A2113	Providing and fixing rotating type chromium plated brass shower rose with 15 or 20 mm inlet all complete.	NOS	4		₹ -	0.0002363
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	500 litres capacity	NOS	1		₹ -	0.0019614
b	1000 litres capacity	NOS	1		₹ -	0.0039227
c	2000 litres capacity	NOS	1		₹ -	0.0078455
d	5000 litres capacity	NOS	1		₹ -	0.0196135
2115	Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	NOS	2		₹ -	0.0257135
A2116	Providing and fixing glass shelves 600mmx127mmx4 mm with chromium plated brackets all complete.	EACH	8		₹ -	0.0008912
A2117	Providing and fixing metal storing cabinets all complete.	EACH	5		₹ -	0.0119745
A2118	Providing and fixing electric operated hand dryer with photo voltaic control.etc all complete..	EACH	5		₹ -	0.0039915
A2120	Providing and fixing grab bars, barrier-free access and appropriate fittings and fixtures for toilets for handicapped etc. all complete.	EACH	8		₹ -	0.0025546
2200	SANITARY: Sanitary work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level as per specification, drawings and as directed by engineer - in - charge.					-
2201	Supply and fixing glazed vitreous china Wash Basin of approved make conforming to IS:2556 part 4 of oval shape with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, fittings, cutting and making good the walls where required etc all complete.					-
a	White	EACH	1		₹ -	0.0027875
b	Colored	EACH	4		₹ -	0.0115532
A2201	Supply and fixing coloured glazed vitreous oval shape china wash basin 450x550mm conforming to IS: 2556 mounted over 20 mm thk granite bevelled edge counter counter. The Basin shall be fitted with approved shape bib cock, photo-voltic control system for water control with flow rate less than 5 LPM (litres per minute) at 45 psi,CP brass chain with rubber plug, 40mm CP brass waste and bottle trap as per IS: 2556 with two taps, necessary union including cutting of notch in granite counter slab etc complete as per specification	EACH	5		₹ -	0.0062063
A2203	Providing and fixing stainless steel kitchen sink/Eye wash sink of size size 610 x 510 mm, bowl depth 200 mm as per approved manufacturer with drain board of at least 450 mm length with trap, hot and cold water mixer, conforming to IS: 13983 including all fittings etc. all complete.	EACH	2		₹ -	0.0031763

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
2204	Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, 2 way bibcock with health faucet necessary C.P connections etc all complete.					-
a	Floor mounted	EACH	2		₹ -	0.0025679
b	Wall mounted	EACH	2		₹ -	0.0046471
A2204	Providing and fixing colour glazed vitreous china European type water closet of approved make conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, necessary C.P connections, water faucet etc all complete.					-
a	Floor mounted	EACH	2		₹ -	0.0025679
b	Wall mounted	EACH	2		₹ -	0.0046471
2205	Providing and fixing colour glazed vitreous indian type Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, 2 way bibcock with health faucet necessary C.P connections etc all complete.	EACH	2		₹ -	0.0025380
A2205	Providing and fixing colour glazed vitreous china Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, necessary C.P connections etc all complete having flow rate of 6/3 LPF (litres per flush) or less at 45 psi.	EACH	2		₹ -	0.0025380
A2206	Providing and fixing white/coloured water efficient flat black glazed vitreous china urinals of size 610x375x390mm with photo voltaic control flushing systems of approved manufacturer simpolo, varmora or equivalent per IS: 2556(pt-6 sec-1) with flush pipes, lead pipes, gratings, traps and necessary C.P fitting etc. all complete as per specification having flow rate of 2 LPF (litres per flush) or less at 45 psi.	EACH	8		₹ -	0.0346532
A2207	Supply, laying and jointing UPVC pipes of Type B as per IS:13592 including bends, branches and all other necessary fittings, M.S. holder bats/ clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following.					-
a	75mm dia pipes	RM	50		₹ -	0.0027679
b	110mm dia pipes	RM	50		₹ -	0.0035390
c	160mm dia pipes	RM	20		₹ -	0.0027143
d	200mm dia pipes	RM	20		₹ -	0.0037013
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.					-
Aa	150mm dia	RM	50		₹ -	0.0055580
a	200mm dia	RM	500		₹ -	0.0741071
b	300mm dia	RM	600		₹ -	0.1616882
c	450mm dia	RM	300		₹ -	0.1181006
d	600mm dia	RM	150		₹ -	0.0804301
e	900mm dia	RM	50		₹ -	0.0484172
2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following.					-

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE / (QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
a	150mm dia	RM	50		₹ -	0.0056006
b	250mm dia	RM	50		₹ -	0.0072159
c	300mm dia	RM	50		₹ -	0.0090990
d	450mm dia	RM	10		₹ -	0.0025049
e	500mm dia	RM	10		₹ -	0.0028247
2210	Providing, laying light duty non pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following:					-
Aa	250mm dia	RM	10		₹ -	0.0031808
Ab	300mm dia	RM	10		₹ -	0.0038170
a	400mm dia	RM	10		₹ -	0.0050893
b	600mm dia	RM	10		₹ -	0.0069545
c	900mm dia	RM	10		₹ -	0.0104529
A2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx600mm including frame from reputed manufacture confirming to IS:4111 etc all complete as per specification.	EACH	10		₹ -	0.0383376
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	10		₹ -	0.0291380
2213	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber (Clay Brickwork in 1:6 mortar, 12mm plaster in 1:6 mortar & 1:2:4 Cement Concrete) 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	10		₹ -	0.0037484
b	150x100mm P or S Type.	EACH	5		₹ -	0.0015925
c	150x150mm P or S Type.	EACH	5		₹ -	0.0023620
A2214	Providing and fixing C.I. floor traps with stainless steel grating etc all complete.	EACH	10		₹ -	0.0028151
A2216	Providing and installing approved brand single tap water efficient water cooler of 50 L cooling capacity all complete.	EACH	2		₹ -	0.0109448
B2216	Providing and installing approved brand single tap water efficient water cooler of 80 L cooling capacity all complete.	EACH	2		₹ -	0.0175117
A2217	Providing and installing approved brand single tap water efficient water cooler of 150 L cooling capacity all complete.	EACH	1		₹ -	0.0126016
2219	Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS: 10592) all complete as per specification.	EACH	2		₹ -	0.0032198
2221	Providing, laying spun CI pipes with conforming to IS 1536 complete for following (Excavation, backfilling, concrete to be paid separately)					-
c	150mm dia	RM	60		₹ -	0.0230260
d	200mm dia	RM	70		₹ -	0.0408182
f	300mm dia	RM	10		₹ -	0.0102630
2223	Providing and fixing vertical wall mounted water geysers/heaters (minimum 5 star rating) of required capacity including all connections & fittings (angular stop cock and brass connection pipes, etc.) all complete as per specification.					-
b	25 Litres	Each	2		₹ -	0.0061575

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

ST NO.	DESCRIPTION OF ITEM	UNIT	QTY	RATES (INR)= BASIC TOTAL AMOUNT (Excl. AMOUNT for ST NO 'A') * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
A2224	Providing and fixing suitable water meter (Maximum Working Pressure 16 bar; Maximum Liquid Temperature 60°C; Connection Flanges according to ISO, BS 10, American Water works Association (AWWA) or others; Register water consumption in cum) on 50 mm domestic water inlet pipe	NOS.	1		₹ -	0.0017370
A2225	Supply, laying and jointing sand cast iron pipe conforming to IS: 1729 including bends, branches and all other necessary fittings, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following.					-
b	160mm dia pipes	RM	10		₹ -	0.0033095
2300	STRUCTURAL WORKS: Structural steel works including all labour, material (unless otherwise specified in BOQ/contract specification), equipments unless otherwise specified, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge.					-
2307	Supplying, fabrication, erection and alignment of factory made electroforged galvanised grating units with mild steel having minimum galvanisation 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. Note: BHEL shall issue the Galvanised Gratings Free of cost.					-
a	Minimum galvanisation of 610 g/sqm	MT	200		₹ -	0.2107466
A2322	Supply, fabrication and fixing of galvanised MS pipe hand railing (Min. 1000 mm high) of 32mm/40mm/50mm dia (Medium Class) including transportation, loading/unloading, painting etc. all complete Payments terms.	MT	3		₹ -	0.0694261
2400	ROAD WORKS: Road works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. as per specification, drawings and as directed by engineer - in - charge.					-
2401	Preparation of sub grade by excavating earth to required depth for all types of soil/ rock, dressing to camber and consolidating the base including making good the undulation etc and disposal of surplus earth within a lead upto 1 km etc. all complete.	CUM	30,864		₹ -	0.4158621
A2402	Supplying and filling with selected good earth of approved quality in layers not exceeding 300 mm loose thickness using excavated soil within a lead upto 1km soil and compacted so as to achieve at least 95 % maximum dry density as per IS-2720 (Part-VII) including royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, testing etc all complete.	CUM	11,621		₹ -	0.1320567
A2404	Providing & laying granular sub-base using close graded material conforming to specification, mixing in a mechanical mix plant at OMC, carriage of mixed material to work site, for all leads & lifts, spreading in uniform layers of specified thickness on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	CUM	23,242		₹ -	9.4326244

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

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A2406	Providing & Laying water bound macadam sub base/base course with stone aggregate 53 mm to 22.4 mm size stone conforming to MORTH specification (Table 400-7) (IRC 19 - grading -3) mixing in a mechanical mix plant at OMC, carriage of mixed material to work site, for all leads & lifts, spreading in uniform layers of specified thickness on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications, drawings and directions of Engineer-in-Charge.	CUM	4,000		₹ -	1.7129860
A2410	Providing & laying 40mm bitumen mastic wearing course over concrete pavement with industrial bitumen of grade 85/25 conforming to IS : 702, prepared by using mastic cooker and laid to required level and slope, including providing antiskid surface with bitumen fine grained hard stone chipping of approved size at the rate of 0.005 precoated cum per 10 sqm and at approximate spacing of 10 cm centre to centre in both directions, pressed into surface protruding 1 mm to 4 mm over mastic surface, including cleaning the surface, removal of debris etc. all complete as per specification, drawings and as per direction of engineer-in-charge. (Considering bitumen using 10.2% as per MORTH specification).	SQM	15,325		₹ -	0.9660218
A2413	Supplying and laying 450mmx250mmx500mm deep precast concrete kerb stone of grade M-25 with 20 mm nominal size stone aggregate and of shape as per detailed drawing including fixing with cement mortar (1:6) in 13mm thick joints, finishing of joints with neat cement paste, making drainage opening where required etc all complete. Note: Kerb Stone including Cement and concrete is in contractor's scope. Cement for mortar shall be issued by BHEL free of cost.	RM	14,100		₹ -	3.3261560
B2413	Supplying and laying 300mmx250mmx150mm deep precast concrete kerb stone of grade M-25 with 20 mm nominal size stone aggregate and of shape as per detailed drawing including fixing with cement mortar (1:6) in 13mm thick joints, finishing of joints with neat cement paste, making drainage opening where required etc all complete. Note: Kerb Stone including Cement and concrete is in contractor's scope. Cement for mortar shall be issued by BHEL free of cost.	RM	4,700		₹ -	0.2217468
A2415	Supply and laying 200mm dia R.C.C NP-3 type Hume pipe in raised shoulders as rain water drains as per detailed drawing including fixing with cement mortar (1:2) in 13mm thick joints, finishing of joints with neat cement paste etc all complete. Note: Cement for fixing mortar only shall be issued by BHEL free of cost	RM	5,405		₹ -	0.6507581
2416	Dismantling of existing road consisting of premix carpet, kerb stone/ brick on edge, bitumen macadam course, WBM, preparing subgrade to receive new WBM including camber consolidation including disposal of debris within a lead of 1 km etc all complete.	SQM	9,750		₹ -	0.2284443
2418	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors at any depth below finished floor level etc. Note: Note: Ready Mix Concrete (RMC) shall be issued by BHEL free of cost at Batching Plant of BHEL's RMC Agency.	CUM	225		₹ -	0.0474198

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

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A2419	Providing and laying Geopolymer concrete of grade M35 using 20 mm nominal size stone aggregate with approved admixture (if required), in road pavement using fully mechanized paver fitted with electronic sensors, provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing formwork etc. all complete. (Excluding the cost of reinforcement and dowel bar) Note: Ready Mix Concrete (RMC) shall be issued by BHEL free of cost at Batching Plant of BHEL's RMC Agency.	CUM	9,685		₹ -	3.1444787
B2419	Providing and laying cement concrete of grade M35 using 20 mm nominal size stone aggregate with approved admixture (if required), in road pavement using fully mechanized paver fitted with electronic sensors, provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar) Note: Ready Mix Concrete (RMC) shall be issued by BHEL free of cost at Batching Plant of BHEL's RMC Agency.	CUM	9,685		₹ -	3.1444787
2421	Providing & laying dry lean cement concrete of grade M15 with 20 mm nominal size graded stone aggregate over a prepared sub-grade including compaction, finishing, curing etc all complete. Note: Ready Mix Concrete (RMC) shall be issued by BHEL free of cost at Batching Plant of BHEL's RMC Agency.	CUM	8,590		₹ -	1.8103833
A2421	Providing & laying dry lean cement concrete of grade M10 with 20 mm nominal size graded stone aggregate over a prepared sub-grade including compaction, finishing, curing etc all complete. Note: Ready Mix Concrete (RMC) shall be issued by BHEL free of cost at Batching Plant of BHEL's RMC Agency.	CUM	11,621		₹ -	2.4491809
B2421	Providing and laying of plain cement concrete of grade M15 using 40 mm graded stone aggregate including providing and fixing formwork, compaction etc. all complete. Note: Ready Mix Concrete (RMC) shall be issued by BHEL free of cost at Batching Plant of BHEL's RMC Agency.	CUM	2,000		₹ -	0.4215095
	REINFORCEMENT					-
A2423	Providing and fixing in position MS dowel bar reinforcement including surface painted with bitumen and greasing, dowel end caps with cotton fills etc all complete as per specification, drawing and as directed by Engineer. Note: Supply of MS Dowel bars is in contractor's scope.	MT	200		₹ -	2.2087728
A2424	Providing, straightening cutting, bending, placing in position at any level, binding in position of steel reinforcement of mild steel reinforcements including cost of binding wire, labour, scaffolding transportation to & from stores etc all complete as per specifications, drawings and as directed by Engineer. Note: Supply of Mild Steel Reinforcement is in contractor's scope.	MT	9		₹ -	0.1227798
	MISCELLANEOUS				₹ -	-

BOQ CUM RATE SCHEDULE**% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL VALUE**

NAME OF WORK: Retaining wall, Patrol Road & Pre-cast / Cast-In-Situ RCC Panels Boundary Wall, Main Plant Gate Complex including CISF Building, Safety Control Room, Main Plant Roads, Drains, Road Crossings and Watch Towers at 2X800MW SINGRAULI STPP STAGE-III.

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A2425	Providing & installation of bitumen impregnated fibre board of 225mm wide x 20mm thickness confirming to IS 1838 as joint filler including nailing, coating of both faces with coal tar pitch/bitumen etc. all complete as per specification, drawing and as directed by engineer.	RM	3,430		₹ -	0.1336363
A2426	Providing and filling in position hot applied bitumen sealing compound (Grade A) of 20mm wide joint confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints, sealant primer etc all complete as per specification, drawing and as directed by Engineer.	RM	12,430		₹ -	0.0987741
A2427	Providing and laying debonding strip/tape of specified thickness before applying sealant including cleaning etc all complete as per specification, drawing and as directed by Engineer.	RM	12,430		₹ -	0.1254501
A2428	Providing & laying 75 mm thick precast interlocking concrete pavers of grade M35 of approved colour and pattern as per specification and recommendation of manufacturer. Note: Supply of 75 mm thick precast interlocking concrete pavers is in contractor's scope.	SQM	36,128		₹ -	4.2699635
A2429	Providing and laying 20mm thick sand layer below concrete pavers including compaction etc all complete as per specification, drawing and as directed by Engineer.	SQM	36,128		₹ -	0.0970646
A2430	Providing and laying Impermeable plastic sheeting 125 microns thick laid flat without creases as per IRC 15-2002 etc all complete as per specification, drawing and as directed by Engineer.	SQM	77,475		₹ -	0.2350661
A2431	Supplying, fixing and removing formwork for concrete road pavement complete as per specification and as directed by the engineer-in-charge.	SQM	6,177		₹ -	0.5672408
A2432	Providing and installation of Variable message signs including Cantilever type MS supports etc. all complete as per drawings, specifications, manufacturer's recommendations, indian standards.	EACH	100		₹ -	0.0727272
	TOTAL AMOUNT				₹ 1,00,00,000.00	100.0000000