

Name of Work: CIVIL works of Statcom on turn key basis at 220 KV Sagapara SUB STATION			
Sr. No.	DESCRIPTION	UNIT	QTY
	Design and construction with supply of all required materials for following items as per relevant standards, technical specifications, special conditions and tender drawings. Bidder shall submit the required design calculation, drawing for execution for approval prior to start execution.		
1	<p>220kV Statcom Control Room Building (GF+ FIRST FLOOR+ TERRACE WITH CABIN as per GETCO requirement) containing panel room, Cooling system room, Valve Hall, Store, lobby, passage, Work shop, Scada Room, LV Room, Battery Room, Pantry, Discussion room, Lavatory Blocks (for Male, Female and Handicapped) including foundations for Valve tower equipments, Floor drain facility, wall bushing arrangement, cable trench, filter and water treatment system and its all related items, ramp with platform, stair case with railing, steel stair for accessing crane platform, cable trench with Hot dip galvanised (Galvanizing shall be as per relevant IS codes and specification) racks and trays, Glass partition, Approved flooring, Rolling shutter, False Ceiling, damp proofing, waterproofing, paints etc as per Technical specification, Door, window, Ventilator, civil & structural works for fixing EOT crane of approved capacity etc including water proofing, anti termite treatment, water supply, drainage inside building as per latest relevant Indian standards and as per requirement as directed by GETCO. Payment will be released progressively on achieving mile stones as per billing break up given.</p> <p>Monorails, Monorail girders and fixtures shall be provided by the Bidder as well as this monorail system includes the supply and installation of all necessary components, including the monorail beam, trolley, hoist and any necessary support structures as mentioned in tender drawing/as per system requirement for lifting of panels or other accessories at first floor of adequate capacity. Monorail of required capacity shall be provided.</p> <p>The monorail beam will be constructed of high-strength steel and will be designed to meet the specific needs of the application. The trolley will be capable of moving along the length of the beam, while the hoist will be used to lift and lower loads.</p> <p>The installation of the monorail system will be performed by trained professionals, who will ensure that the system is installed safely and according to all relevant safety standards. This may include the installation of support structures, such as columns or brackets, to ensure that the monorail system is securely attached to the building structure.</p> <p>(Note: Tentative carpet area & height of building shown in Tender drawing as well in Tender specification along with tender housing is given along with tender to spell out requirements and enable bidders to quote. However, details will be finalised during detailed engineering and it is important that bidder shall study and include full requirements- functional, operational & maintenance, safety and grid code etc which are essential and necessary for building and installing 220 kv statcom as per relevant standards in their bid.)</p> <p>Control room building consist be RCC Framed structure.</p> <p>(Protection of RCC structure under ground and above ground upto plinth level against corrosion and weather shall be provided with epoxy coating as mentioned in Technical specification. The cement and steel shall also be considered accordingly.)</p> <p>Please note that minimum depth of foundation shall be as under</p> <p>(1) For Normal soil strata/soft rock strata (Open footing) -- 2500mm</p> <p>(2) For pile foundation -- 2000mm cutoff level</p> <p>(3) For Hard rock strata - 1500mm plus anchoring of sufficient capacity (inside hard rock strata) of HILTI or Equivalent company product.</p> <p>The minimum Grade of concrete shall be M25.</p> <p>Dimension of GIS building shall be as mentioned in Tender drawing, Technical specification and relevant IS codes and standards.</p> <p>The item is of LUMP SUM BASIS but payment shall be made as per actual building dimension, the conditions of which is mentioned as under.</p> <p>FORMULA TO CALCULATE CUBIC METER OF ROOMS OF BUILDING :</p> <p>LENGTH = IN TO IN DIMENSION OF WALL OF ROOM</p> <p>WIDTH = IN TO IN DIMENSION OF WALL OF ROOM</p> <p>HEIGHT = DIMENSION FROM FINISHED FLOOR LEVEL TO BOTTOM OF ROOF SLAB</p> <p>CUBIC METER OF ROOM = LENGTH X WIDTH X HEIGHT (AS MENTIONED ABOVE)</p> <p>TOTAL CUBIC METER OF STATCOM CONTROL ROOM BUILDING = CUBIC METER OF "VALVE HALL" + CUBIC METER OF "ROOM FOR PANELS" + CUBIC METER OF "FILTER & WATER TREATMENT ROOM" + CUBIC METER OF "L.V. ROOM" + CUBIC METER OF "SCADA ROOM" + CUBIC METER OF "BATTERY ROOM" + CUBIC METER OF "LADIES AND GENTS TOILET BLOCK" + CUBIC METER OF "CABLE VAULT AREA" + CUBIC METER OF "PASSAGE INSIDE BUILDING" + CUBIC METER OF "STAIRCASE AREA WITH STAIR CABIN" + CUBIC METER OF "STORE" + CUBIC METER OF "DISCUSSION ROOM" OR CONFERENCE ROOM + CUBIC METER OF OTHER ROOM AS PER TECHNICAL REQUIREMENT.</p> <p>NOTE: Please note that, quantity of cubic meter considered in this BOQ is on approximation basis. However, Payment shall be made as per actual dimension and according to the formula given in Tender drawing and Technical specification. However, Scope of work and item rate shall be inclusive of all the works & items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the Statcom building in all respect as per relevant IS codes and standards (latest).</p>	CUM	5312.00

Sr. No.	DESCRIPTION	UNIT	QTY
IMPORTANT NOTE: (1) Soil data has been provided in bid for reference only. Bidder shall take soil investigation at their own cost and design the civil buildings and foundations for other structure accordingly as per specification and requirement.			
2	<p>Providing & laying RCC FOUNDATIONS FOR SUPPORT STRUCTURES FOR FOLLOWING EQUIPMENT/TOWER GANTRY/TRANSFORMER/REACTOR etc of minimum grade M-20 for exposed work including the cost of excavation in all sorts of soil/rock/RCC, back filling with non cohesive soil/sand, lean concrete, necessary formwork (ply wood shuttering form work and adjustable tubular steel supports), scaffolding in true line and level, pouring & compacting with machine vibrator, Providing & fixing foundation bolt with template, grouting of foundation bolts with GP-2 or equivalent high strength non-shrink type material, curing with jute bags on RCC surface etc. complete including cost of reinforcement.</p> <p>(Protection of RCC structure under ground and above ground against corrosion and weather shall be provided with epoxy coating as mentioned in Technical specification. The cement and steel shall also be considered accordingly.) Minimum Grade of concrete shall be M20.</p> <p>Please note that minimum depth of foundation shall be as under</p> <p>(1) for Normal soil strata/soft rock strata (Open footing) -- 3500mm for Tower Gantry foundation & 1500mm for Equipment support structure foundation</p> <p>(2) For pile foundation -- 2000mm cutoff level for Tower Gantry foundation & 1000mm cutoff level for Equipment support structure foundation.</p> <p>(3) For Hard rock strata - 2000mm plus anchoring of sufficient capacity (inside hard rock strata) of HILTI or Equivalent company product for Tower Gantry Foundation & 1000mm plus anchoring of sufficient capacity (inside hard rock strata) of HILTI or Equivalent company product for Equipment support structure foundation.</p> <p>However, Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, cost of Foundation bolt as per approved drawing, cost of Rail pieces for Transformer and rail cum road work, Technical specification and required items to complete the work as per relevant IS codes and standards/drawings</p>		
A	FOR 220KV LA/HLA	NO	3.00
B	FOR 220KV BPI/HBPI	NO	33.00
C	FOR 220KV HDB Isolator (3No = 1 set)	NO	3.00
D	FOR 220KV Tandom Isolator (3No = 1 set)	NO	9.00
E	FOR 220KV CT (3No = 1 set)	NO	3.00
F	FOR 220KV CB (3No = 1 set)	NO	3.00
G	FOR 220KV BMK	NO	2.00
H	<p>FOR TRANSFORMER OF 220/XX KV INCLUDING RADIATOR BANK AND OTHER FOUNDATIONS AND ITS MARSHALLING WORK AND ITS TRACK UPTO ROAD INCLUDING REQUIRED RAIL PIECES. The rate includes design and construction of oil soak pit of required capacity surrounding Transformer of required capacity as per relevant standards and codes and CEA requirement.</p> <p>(Protection of RCC structure under ground and above ground against corrosion and weather shall be provided with epoxy coating as mentioned in Technical specification.</p> <p>Tender drawing is attached herewith for ready reference.</p> <p>(Construction of Transformer foundation shall be cast in two stage as under.</p> <p>(1) Main plinth (minimum size of Transformer plinth in plan shall be 6500 mm(L) x 4000mm(B)). Transformer plinth shall be cast in first stage as per the data given by GETCO as tentative but on higher side loading from available data of manufacturer of 160 mva transformer.</p> <p>(2) Foundations for accessories other than main plinth along with surrounding oil soak pit shall be cast in 2nd stage as per GA drawing of manufacturer of actual allotted transformer by GETCO.)</p> <p>It is important that bidder shall study and include full requirements- functional, operational & maintenance, safety and grid code etc which are essential and necessary for TRANSFORMER as per standards in their bid.</p> <p>However, Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the work as per relevant IS codes and standards/drawings</p>	NO	1.00

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I	For all MV equipments as per design (i.e. Circuit Breakers, CT, PT, HDB Isolator, Surge arresters, BPI, reactors, series reactors, fuse, Charging resistor and any other equipment / support structure foundation required for satisfactory operation of Statcom unit shall be in the scope of the bidder.	LUMPSUM (Package)	1.00
J	FOR LIGHTENING MAST OF REQUIRED HEIGHT(25 METER & ABOVE)(AS PER REQUIREMENT OF DESIGN CALCULATION AND APPROVED LAY OUT)	NO	1.00
K	FOR 2CPA3	NO	2.00
L	FOR 2CPA4	NO	2.00
M	FOR 2CB1	NO	2.00
N	1CPC2	NO	2.00
O	D.G.SET RCC WITH MINIMUM 750MM DEPTH INSIDE GROUND LEVEL)	NO	1.00
P	LT YARD suitable arrangement of 11kV Connection - including foundations for 22KV/11KV LA/CT/CB/ISO/DOUBLE POLE STRCTURES/CABLE TERMINTION STRCTURE/BPI/HBPI / distribution switch for changeover arrangement and distribution transformer including rail pieces as per approved GA drawing of manufacturer and considering quantities of all required foundations for 02 feeder bays i.e. 11kV express feeder bay and 66/11kV feeder bay from other 66kV S/S.	LUMPSUM (Package)	1.00
Q	For cooling tower near statcom building required all foundation in set	Set	1.00
3	<p>RCC CABLE TRENCHES INCLUDING BIG BANG CROSSING with Galvanized racks in all respect (as mentioned in tender drawing) as per respective Technical Specifications and relevant special conditions.Cable trench cover shall be prestressed cover of required thickness.(Minimum thickness of the prestressed cover shall be 50mm).</p> <p>The mimimum Grade of concrete shall be M20 . No seperate payment shall be made for making base if any.</p> <p>Protection of RCC structure under ground and above ground against corrision and weather shall be provided with epoxy coating as mentioned in Technical specification.The cement and steel shall also be considered accordingly.).</p> <p>However,Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Cost of adequate capacity of RCC collection sump (as per site requirement) and submersible monoblock pump of 5 H.P. capacity, Technical specification and required items to complete the work as per relevant IS codes and standards.</p> <p>Payment shall be made on square meter basis.i.e. Length of cable trench x Width of cable trench (width shall be considered " out out of RCC wall of cable trench").</p>		
A	ONE TIER CABLE TRENCH (MINIMUM INNER SIZE SHALL BE 450 MM X 450 MM)	RUNNING METER	36.00

Sr. No.	DESCRIPTION	UNIT	QTY
B	TWO TIER CABLE TRENCH (MINIMUM INNER SIZE SHALL BE 1000 MM X 800 MM)	RUNNING METER	235.00
C	2 X 2 TIER CABLE TRENCH (MINIMUM INNER SIZE SHALL BE 1300 MM X 1100MM)	RUNNING METER	45.00
D	CABLE TRENCH (MINIMUM INNER SIZE 2050 MM X 1100 MM)	RUNNING METER	30.00
4	<p>RCC FIRE PROTECTION WALL in all respect with latest relevant STANDARDS & CODES and as per requirement of transformer/Reactor safety.</p> <p>Minimum length of fire protection wall shall be 10.400 meter and Height of Fire protection wall shall be 10.00 meter(From FGL to top of FP wall). However, Length and Height of F.P.wall may increase as per actual requirement in reference to standards and codes.</p> <p>It is important that bidder shall study and include full requirements- functional,operational & maintenance, safety and grid code etc which are essential and necessary for TRANSFORMER/Fire protection wall as per standards in their bid.</p> <p>Minimum depth of foundation inside ground level shall be as under.</p> <p>(1)for Normal soil strata/soft rock strata (Open footing) -- 3000mm</p> <p>(2) For pile foundation -- 2000mm cutoff level</p> <p>(3) For Hard rock strata - 1500mm plus anchoring of sufficient capacity(inside hard rock strata) of HILTI or Equivalent company product</p> <p>The minimum Grade of concrete shall be M20</p> <p>(Protection of RCC structure under ground and above ground against corrosion and weather shall be provided as mentioned in Technical specification.The cement and steel shall also be considered accordingly.).</p> <p>However,Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the fire protection work as per relevant IS codes and standards & drawings.</p>		
A	FOR 220/XX KV TRANSFORMER & 66KV TRANSFORMER	NO	1.00
5	<p>RCC Roads supported by WBM road (WBM road having Minimum 750mm thickness shall consist of GSB layer & WMM layer as per MORT & H specification(minimum thickness of GSB layer shall be 450mm thick but which may be increased as per design requirement and minimum thickness of WMM layer shall be 300mm which may increase as per design requirement) , Minimum thickness of RCC road shall be 300mm. C.D Works, Paving & Storm water Drains in all respect shall be provided as per latest relevant STANDARDS.Design of WBM road shall be done as per CBR value and other soil data.</p> <p>Yellow earth required for embankment (other than GSB layer ,WMM layer, RCC Road etc) shall be paid separately as per actual required on site under relevant item.</p> <p>Design of RCC road with WBM road road shall be done as per CBR value, IRC standard, relevant specifications/standards/BOQ description and other soil data.</p> <p>Payment shall be paid as per actual execution. Width of road from shoulder to shoulder shall be considered for payment</p> <p>However,Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the RCC road work as per relevant IS codes and standards/drawings.</p>		

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A	RCC ROAD- 3.0/4.50/6.0/7.0 METER WIDE WITH FANNING REQUIRED FOR TURNING OF TRANSFORMER WITH TRAILER AT JUNCTION with minimum loading of transformer with trailer.Width of road shall be as per approved electrical lay out.	SQ. METER	600.00
6	<p>SECURITY CABIN for 220kv sub station including foundations & its all related required items,,including water supply, drainage as per latest relevant standards.Architect drawing shall be provided by GETCO. However, construction drawing shall be developed by bidder.Payment will be released progressively on achieving mile stones as per billing break up given (Note: Architect drawing showing the dimension of room and othe details is given by GETCO and other details are mentioned in Tender specifiacion are given alongwith tender to spell out requirements and enable bidders to quote.However, it is important that bidder shall study and include full requirements as per relevant standards and codes.</p> <p>SECURITY CABIN shall be a RCC framed structure.</p> <p>((Protection of RCC structure under ground and above ground against corrsion and weather due to saline atmosphere/marine environment conditions shall be provided with painting / coating of FOSROC or Equivalent company product.The cement and steel shall also be considered accordingly.)</p> <p>The minimum grade of concrete shall be M25</p> <p>Please note that monimum depth of foundation shall be as under (1)for Normal soil strata/soft rock strata (Open footing) -- 2000mm</p> <p>(2) For pile foundation -- 500mm cutoff level</p> <p>(3) For Hard rock strata - 1000mm plus anchoring of sufficient capacity(inside hard rock strata) of HILTI or Equivalent company product However, Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, Technical specification and requirement to complete the work as per relevant IS codes and standards.</p>	LUMPSUM (Package)	1.00
7	External Water Supply System (U/G + OH tank) including water supply pipe line, necessary fixtures,fastenings,valves etc. AS PER RELEVANT STANDARDS AND CODES.		
A	Providing & installing readymade white color three layered P.V.C. water tight storage tank made from linear low density polyethylene & low density polyethylene LDPF product confirming to I.S: 10146/1982 with cover including providing & fixing one 20mm.dia. float valve ball cock ,one 20mm.dia. G.I. Waste pipe with plug one 25mm.dia.G.I.Over flow pipe of length up to 0.30 Mt. including making all connection for inlet/outlet supply with necessary fittings for outlet/ inlet etc., complete as directed by E.I.C.1000 litre capacity	NO	2.00
B	<p>Providing & Erecting in position UNDERGROUND R.C.C. Water tank in M20 having 250mm. thick bottom slab, 170mm thick top slab & side walls 250mm. thick with clear inner dimension of 5000 X 3000 X2500mm, shuttering finishing outer exposed faces with 12mm. thick cement plaster in C.M.(1:3)& inner surfaces with 12mm. thick with water proof in C.M.(1:3) using water proofing compound, one 600 X 600mm. CI manhole cover(Heavy duty) with one over flow pipe & hole for inlet pipe giving leak proof test etc., completed as directed by E.I.C. The Rate is inclusive of making connection for inlet/outlet supply with necessary fittings for outlet/inlet, submersible monoblock of required capacity(For lifting water from under ground tank to terrace of control room building.Minimum 2.0 HP pump shall be used) with eletrical fiitings including censors at terrace tank and underground tank, wires,PVC water stopper and all items required to complete the work in all respect..</p> <p>Protection of RCC structure under ground and above ground against corrsion and weather shall be provided with epoxy coating as mentioned in Technical specification.The cement and steel shall also be considered accordingly.).</p> <p>Tender drawing is attached for reference purpose.</p> <p>However,Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the RCC under ground tank work as per relevant IS codes and standards</p>	LUMPSUM (Package)	1.00
C	<p>PIPING REQD FOR ABOVE WORK OF VARYING DIAMETER(Water supply line inside the buildings is in the scope of their individual items. This item includes pipe line from water source to O.H. Tank / terrace tank of each building and water line reuired in switch yard area). Qty considered is on approximate basis. However payment shall be made as per actual execution of work.</p> <p>Providing laying and joining in true line and level UPVC pipe (SCH-40) including fittings of PRINCE/ SUPRIME/ ASTRAL/ FINOLEX or equivelent make or as approved by EIC.Pipe shall be fixed on the wall with the help of clamp at every 2000mm c/c or shall be concilled or necessary excavation in trenches as directed including necessary fittings including testing of pipe and joints and fixing the same with adhesive solvant,including cost of all materials and necessary refilling the trenches,dressing etc complete.</p> <p>However, Item rate and scope of work shall be inclusive of al the works /items mentioned in Tender drawing,BOQ description,Tenchnical specification and requirement to complete the work as per relevant IS codes and standards</p>		

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i	u Pvc pipe of 40mm dia	RMT	300.00
ii	u Pvc pipe of 25mm dia	RMT	200.00
iii	u Pvc pipe of 15mm dia	RMT	50.00

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8	Septic Tank with Soak Pit and complete drainage system (External) including inspection chamber AS PER CODES AND RELEVANT STANDARDS. The minimum Grade of concrete shall be M20. However, Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing/BOQ description, Technical specification and requirement to complete the work as per relevant IS codes and standards		
A	RCC SEPTIC TANK ON THE BASIS OF ATTACHED TENDER DRAWING. However, Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, providing and installing submersible sewage pump of 5 H.P capacity of approved quality and make as per relevant codes and standards, Technical specification and required items to complete the RCC septic tank work as per relevant IS codes and standards	NO	2.00
B	Providing 3000mm. internal diameter & 4.0 Mt. deep soak pit including excavation in all types of soil & soft rock & B.B.C.C. (1:4:8) bedding 300mm. thick below masonry and 450mm. thick Brick Masonry in C.M.(1:6) up to 1500mm. height, 350mm. thick for further 1500mm. and 230mm. thick for remaining height honey combed, plastering in C.M.(1:3) outside up to 1.5 Mt. height and 100mm. thick R.C.C. Slab with 600X600mm. C.I. HEAVY cover with frame, with necessary reinforcement as per design & C.I. Vent pipe 1800mm. long with Bella Masonry pillar 350X350X450 plastered all around filling 40 to 50mm. size brick bats up to 1.5 Mt. depth, including 16mm. dia. M.S. 'U' stages steps refilling including disposal of the surplus excavated earth up to the lead of 300mt radius including 3 coats of white or colours wash to all exposed finished surface etc. complete as directed by E.I.C. Rate is inclusive of modifying the design or providing treatment below if required as per soil condition which is to be approved by GETCO. However, Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the Soak pit work as per relevant IS codes and standards.	NO	2.00
C	DRAINAGE LINE OF SALT GLAZED STONEWARE PIPES/RCC HUME PIPE OF REQUIRED DIAMETER. Qty considered is on approximate basis. However payment shall be made as per actual execution of work. Design and lay out of drain to be approved by GETCO.		
i	Providing and laying 100mm internal diameter (to level or slopes) and jointing with stiff mixture of cement mortar in proportion 1:1 approved quality salt glazed stoneware pipes including testing of pipes and joints complete. Qty considered is on approximate basis. Appropriate design shall be done for supporting of joints of pipe considering soil conditions. However payment shall be made as per actual execution of work. Design and lay out of drain to be approved by GETCO. However, Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the work as per relevant IS codes and standards.	RMT	30.00
ii	Providing and laying 150mm internal diameter (to level or slopes) and jointing with stiff mixture of cement mortar in proportion 1:1 approved quality salt glazed stoneware pipes including testing of pipes and joints complete. Qty considered is on approximate basis. Appropriate design shall be done for supporting of joints of pipe considering soil conditions. However payment shall be made as per actual execution of work. Design and lay out of drain to be approved by GETCO. However, Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the work as per relevant IS codes and standards.	RMT	30.00
iii	Providing and laying 150mm internal diameter (to level or slopes) and jointing with stiff mixture of cement mortar in proportion 1:1 approved quality NP2 pipes including testing of pipes and joints complete. Qty considered is on approximate basis. Appropriate design shall be done for supporting of joints of pipe considering soil conditions. However payment shall be made as per actual execution of work. Design and lay out of drain to be approved by GETCO. However, Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the work as per relevant IS codes and standards.	RMT	30.00

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iv	<p>Providing & laying 'NP3' class RCC Hume pipe of 300 mm dia. including necessary excavation, refilling the trenches, laying 150 mm thick B.B.C.C 1:4 below joints and upto half the height of joints making water tight joints in C.M. 1:1 curing etc. comp. Appropriate design shall be done for supporting of joints of pipe considering soil conditions.</p> <p>Qty considered is on approximate basis. However payment shall be made as per actual execution of work.Design and lay out of drain to be apporved by GETCO.</p> <p>However,Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the work as per relevant IS codes and standards.</p>	RMT	60.00

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D	Constructing masonry for under ground C.I. Inspection chamber and bends with bricks/blocks having crushing strength not less than 35mkg//cm 2 in Cm 1:5 C.I. cover with frame [light duty] 455 mm x 610 mm internal dimension total weight of cover with frame to be not less than 38 Kg[w.t. Of cover 23 Kg and wt of frame 15 Kg] RCC top slab with 1:2:4 mix [1 cement: 2 coarse sand:4 grade stone aggregate 20mm size] foundation concrete 1:5:10 inside plaster 15mm thick with cement mortar 1:3 finished smooth a floating coat of neat cement on walls and bed concrete etc. complete Inside dimension 455mmx610mm Treatment shall be provided below chamber as per soil conditions. However,Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the work as per relevant IS codes and standards.	NO	10.00
9	Supplying and spreading 'Round up'(Glyphosphate 41%SL) of approved ISI standard make or equivalent weedicide for weed control in proportion of 100ml weedicide and 250 gram ammonium sulphate ,mixing with sticking agent mixed with 10 litre of clean fresh water as per manufacturer's specification and as directed by Engineer-in charge. However, Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the weed control work as per relevant IS codes and standards. Qty considered is on approximate basis. However payment shall be made as per actual execution of work as per approved Electrical lay out by GETCO.	SQ. METER	8225.00
10	Supply & Spreading black trap stone machine crushed kapchi metal 25 to 40 mm. size metal in yard in 100mm layer with 75mm thick PCC 1:5:10 underneath including watering, ramming, dressing up to one level, royalty, all Government taxes transportation etc., complete as directed by E.I.C. A layer of cement slurry of mix 1:6 (1cement: 6 fine aggregate) shall be laid uniformly over cement concrete layer. The cement consumption for cement slurry shall not be less than 150 kg for every 100 sq.m. For easy drainage of water, the slope of 1:1000 is to be provided from the ridge to the nearest drain. The Scope of work includes the area grading work for maintaining required slope for metal spreading, compaction of earth etc However, Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, Technical specification and required items to complete the metal spreading work as per relevant IS codes and standards Qty considered is on approximate basis. However payment shall be made as per actual execution of work as per approved Electrical lay out by GETCO.	SQ. METER	8225.00
11	Dismantling the B.B. /Block/Bella /U.C.R. masonry work in C.M. or L.M. including scaffolding and throwing away the dismantled stuff outside sub station premises & stacking of the useable material etc., complete as directed by E.I.C. (This item shall be executed only if required.)	CU. METER	690.00
12	Dismantling the C.C. or RCC work for foundation and building work by chipping the reinforced concrete of any grade and age of old foundation, slab / wall for mass heavy concrete structure of substation etc. making hole, slot of any size and shape by manually with pneumatic Air Compressor breaker at any height / depth, cutting the reinforcement, as required and disposing the chopped out stuff outside substation to all lead & lift,dressing etc., complete as directed by Engineer in charge. (This item shall be executed only if required.)	CU. METER	75.00
13	Labour charges for removing the chainlink fencing panels & posts & GATE with nuts & bolts from angle supports including stacking the same as directed by E.I.C.	RMT	375.00

Sr. No.	DESCRIPTION	UNIT	QTY
14	<p>Providing, supplying, fabricating & erecting chain link fencing WITH GATE as shown in approved electrical lay out and as per instruction of EIC. . The detailed description of chainlink fencing panel and supporting angle is as under.</p> <p>CHAIN LINK FENCING PANEL: Chainlink fencing panel of size 2400 X 2000mm. made from 75X75mm & 10 Gauge G.I. Chainlinks & 50X50X6mm. angle including fixing the chainlink in angle frame by means of 40X3mm. M.S. Flat welded to angle frame drilling to holes in angle frame & flat & fixing the same with angle post in line level & plumb by means of 10mm. dia. bolts frame & flat & nuts, etc., completed as per drawing & as directed by E.I.C. ..</p> <p>CHAINLINK FENCING ANGLE: Chain link fencing angle of size 50X50X6mm. M.S. Angle for vertical support 3.35Mt. long including providing & 50X6mm. M.S. Flat/pieces, 150mm. long welded at top & bottom of support with 18mm. dia. slotted holes in flats, cutting & bending angle at 45 degree as required at top with 3 nos. of 6mm.dia. holes for fixing barbed wire at top as per drawing & as directed by E.I.C. Grouting the same in RCC foundation in line & level etc., complete.</p> <p>Payment shall be made in RMT basis.(ALL THE MS STRUCTURE SHALL BE HOT DIP GALVANIZED.GALAVANIZING SHALL BE DONE AS MENTIONED IN TECHNICAL SPECIFICATION OF STEEL STRCUTES)</p> <p>However,Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, necessary excavation and foundation of minimum grade of M20 chainlink fencing panel, supporting angle post, erection and cost of all materials,labours,bolts,nuts,chainlink fencing, Barbed wire fencing,Cost of retaining wall, Chain link fencing, sliding/hinged gate in continuation to Ch.fencing,Galvenizing, Technical specification, and required items to complete the Chain link fencing work as per relevant IS codes and standards</p>	RMT	50.00
15	<p>Providing, supplying, fabricating & erecting chain link fencing cum Retaining wall WITH GATE as shown in approved electrical lay out and as per instruction of EIC. . The detailed description of chainlink fencing panel and supporting angle is as under.</p> <p>CHAIN LINK FENCING PANEL: Chainlink fencing panel of size 2400 X 2000mm. made from 75X75mm & 10 Gauge G.I. Chainlinks & 50X50X6mm. angle including fixing the chainlink in angle frame by means of 40X3mm. M.S. Flat welded to angle frame drilling to holes in angle frame & flat & fixing the same with angle post in line level & plumb by means of 10mm. dia. bolts frame & flat & nuts, etc., completed as per drawing & as directed by E.I.C. ..</p> <p>CHAINLINK FENCING ANGLE: Chain link fencing angle of size 50X50X6mm. M.S. Angle for vertical support 3.35Mt. long including providing & 50X6mm. M.S. Flat/pieces, 150mm. long welded at top & bottom of support with 18mm. dia. slotted holes in flats, cutting & bending angle at 45 degree as required at top with 3 nos. of 6mm.dia. holes for fixing barbed wire at top as per drawing & as directed by E.I.C. Grouting the same in Retaining wall in line & level etc., complete.</p> <p>RCC retaining wall shall be provided to retain filled up earth between EGL & FGL</p> <p>Rate is inclusive of RCC Retaining wall below chainlink fencing.</p> <p>Payment shall be made in RMT basis.(ALL THE MS STRUCTURE SHALL BE HOT DIP GALVANIZED)</p> <p>Looking to the soil conditions, RCC Retaining wall shall be as below:</p> <p>Please note that minimum depth of foundation shall be as under</p> <p>(1)for Normal soil strata/soft rock strata (Open footing) -- 1500mm</p> <p>(2) For pile foundation --1000mm cutoff level</p> <p>(3) For Hard rock strata - 1000mm plus anchoring of sufficient capacity(inside hard rock strata) of HILTI or Equivalent company product for Equipment support structure foundation.</p> <p>However,Item Rate & Scope of work shall be inclusive of all the works/items mentioned in Tender drawing, BOQ description, necessary excavation and foundation of minimum grade of M20, chainlink fencing panel, supporting angle post, erection and cost of all materials,labours,bolts,nuts,chainlink fencing, Barbed wire fencing,Cost of retaining wall, Chain link fencing, sliding/hinged gate in continuation to Ch.fencing,Galvenizing, Technical specification, and required items to complete the RCC retaining wall cum compound wall work as per relevant IS codes and standards</p>	RMT	316.00
16	<p>Earthwork for embankment including breaking clods, dressing with all lead and lift (including watering, rolling and consolidation with 8 to 10 T rollers inlayers of 200mm thick at O.M.C to required dry density). Including all Labour charges & approved quality of Earth/Murum & Govt. royalty charges etc. if applicable. Approved quality of yellow earth/Murum to be brought from outside. (25 % of the successive bill amount shall be retained till lapse of one full scale monsoon and rectifications of subsistence if any to the design ground level)</p>	CMT	9406.00

Sr. No.	DESCRIPTION	UNIT	QTY
17	Earth work in cutting in all sorts of soil and soft/hard murrum/soft rock/hard rock including conveying,breaking boulders in small piece and spreading the stuff,embankment as and where directed within & any mtrs.from the end of the cutting with all required lead and lift,including watering,consolidating spreaded soil anrd rolling of filled earth work in 200 mm thick layers at OMC to required density consoladation with power roller 8 to 10 T.including filling in depressions which occur during the process,including watering of earthwork etc.as directed by EIC.(Only cutting measurement will be Paid)including throwing away the extra stuff to out side premises any lead etc. complete.	CMT	1409.00

SPECIAL NOTE NO.1: Billing break up for Buildings LUMPSUM(package) items shall be as under. (1) For STATCOM building (FOR GF+FF BUILDINGS)			
SR.N O.	STAGE OF WORK	%AGE OF PAYMENT TO BE RELEASED	
1.1	Up to plinth level	15%	
1.2	Up to GF lintel level	5%	
1.3	Up to GF Slab level	15%	
1.4	Up to FF lintel level	5%	
1.5	Up to FF slab level	10%	
1.6	Masonry up to FF slab level including parapet.	15%	
1.7	Plastering,Flooring, Door/Window,Painting , False ceiling etc	20%	
1.8	Water supply and Drainage line	5%	
1.9	Completion of building in all respect (The amount will be paid within 60 days against commissioning of sub station only after settlement of material account statement of items supplied, used, erected, and successful commissioning of sub station.The amount will be released in final bill only and payment will be made only after passing of final bill.)	10%	
	DEPUTY ENGINEER(CIVIL)		
	EXECUTIVE ENGG(CIVIL)		
SPECIAL NOTE NO.2 FOR WATER PROOFING : The contractor shall submit performance guarantee of the waterproofing item for respective buildings as shown below for a period of 5 years from actual date of completion of work on stamp paper of appropriate value in approved format of GETCO. The bidder has to give the consent to deduct the amount shown in below table for respective buildings for a period of 5 years from actual date of completion from his bill and shall be withheld as a performance gaurantee for five years.			
SR.N O.	NAME OF BUILDING	AMOUNT IN RS.	REMARK
1	220KV STATCOM BUILDING	129000	

Sr. No.	DESCRIPTION	UNIT	QTY
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SPECIAL NOTE NO.3 FOR ANTI TERMITE TREATMENT :

The contractor shall submit performance guarantee of the **antitermite treatment** item for respective buildings as shown below for a period of 5 years from actual date of completion of work on stamp paper of appropriate value in approved format of GETCO. The bidder has to give the consent to deduct the amount shown in below table for respective buildings for a period of 5 years from actual date of completion from his bill and shall be withheld as a performance guarantee for five years.

SR.N O.	NAME OF BUILDING	AMOUNT IN RS.	REMARK
1	220KV STATCOM BUILDING	11500	