

Individual Report

Tender/Proposal Detail			
Tender/Proposal ID :	243880	Invitation Reference No. :	T-3/248, dt.-01/11/2018
Closing Date and Time :	04-Dec-2018 13:00	Opening Date and Time :	04-Dec-2018 13:00
Procuring Entity :	Sunamganj O&M Division		
Brief :	Construction of Puknarai Regulator (1V-1.5m x 1.8m) at km 25.720, Muktakhai Regulator (2V-1.5m x 1.8m) at km 20.770, Causeway (6.00m) at West Juringa Khal at km 18.560 and 5 nos. Causeway (4.00m) at km 16.330, km 15.640, km 24.160, km 26.450 & km 27.510 of Dhakua Haor Sub-project in c/w "Hoar Flood Management & Livelihood Improvement Project (BWDB Part)" under Sunamganj O&M Division-1, BWDB, Sunamganj during the FY : 2018-19 & 2019-20.		

Package No	Package Description
BWDB/Sunam/HFMLIP/PW-03	Construction of Puknarai Regulator 1V-1.5m x 1.8m at km 25.720 Muktakhai Regulator 2V-1.5m x 1.8m at km 20.770 Causeway 6.00m at West Juringa Khal at km 18.560 and 5 nos. Causeway 4.00m at km 16.330 km 15.640 km 24.160 km 26.450 & km 27.510 of Dhakua Haor Sub-project in c/w Hoar Flood Management & Livelihood Improvement Project BWDB Part under Sunamganj O&M Division-1 BWDB Sunamganj during the FY 2018-19 & 2019-20.

Ataur Rahman Khan Ltd.- Ashim Singh JV (JVCA)

Bill of Quantities

Bill of Quantities									
Item no.	Group	Item Code (if any)	Description of Item	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In Words (BDT)	Total Price In Figures (BDT)	Total Price In Words (BDT)
1	1	1	Construction of B.M. Pillars at site with first class bricks in cement mortar (1:4) of size 38cm x 38cm x 75cm on cement concrete (1:2:4) base of size 50cm x 50cm x 7.5cm with 12mm thick cement plastering (1:2) on exposed surfaces of pillar and cement mortar on top (1:2), with inscription of "BWDB" with 25cm of the pillar below ground level etc. complete including ramming the backfill and the cost of all materials as per direction of Engineer in charge.	each	16.000	1323.001	One Thousand Three Hundred and Twenty-Three point Zero Zero One	21168.016	Twenty-One Thousand One Hundred and Sixty-Eight point Zero One Six
2	2	2	Site preparation by manually removing all miscellaneous objectional materials from entire site and removing soil upto 15cm depth including uprooting stumps, jungle clearing, levelling dressing etc. complete as per direction of Engineer in charge.	sqm	79500.000	34.001	Thirty-Four point Zero Zero One	2703079.500	Twenty-Seven Lakh Three Thousand AND Seventy-Nine point Five
			Earth work in excavation of foundation trenches in all kinds of soils as per layout plan of foundation excavation with all leads and lifts and placing the spoil earth for constructing the				Two Hundred		Ninety Lakh Twelve

3	3	3	ring bundh/ cofferdam where necessary as per design and specification or disposing it to a safe distance including pushing, levelling, dressing, etc. complete as per direction of Engineer in charge. For moving spoil earth upto a distance of 100m from the centre of the pit.	cum	31621.098	285.001	hundred and Eighty-Five point Zero Zero One	9012044.551	Twelve Thousand AND Forty-Four point Five Five One
4	4	4	Installation of pizeometer including supply of 40mm G.I. pipe, brass strainer, socket, labour, by wash boring, lowering, fixing the elevation and providing cover on the top of the well etc. complete as per direction of Engineer in charge.	each	8.000	3120.001	Three Thousand One Hundred and Twenty point Zero Zero One	24960.008	Twenty-Four Thousand Nine Hundred and Sixty point Zero Zero Eight
5	5	5	Shoring for slope protection of foundation trench, canal, embankment, road, pond etc. as per design slopes, grades including removal of spoils to a safe distance as per direction of Engineer in charge. By bamboo post of 6.0m length, 60mm to 80mm dia, 20cm c/c driven 2.0m below ground, with drum sheet walling and average 70mm dia half split bamboo batten @ 2.0m c/c fixed with nails.	sqm	1130.400	806.001	Eight Hundred and Six point Zero Zero One	911103.530	Nine Lakh Eleven Thousand One Hundred and Three point Five Three
6	6	6	Bailing out of water with all leads and lifts by manual labour or pump, with all arrangements for protection of ring bund and side slopes of foundation pit against erosion or washout etc. complete (actual volume of work will be measured by sounding method before starting the work) as per direction of Engineer in charge. by pump.	cum	277283.791	7.001	Seven point Zero Zero One	1941263.821	Nineteen Lakh Forty-One Thousand Two Hundred and Sixty-Three point Eight Two One
7	7	7	Supplying at site U-shape hot rolled steel sheet pile of different section of Phosphorus=0.04%(Maximum), Sulphur = 0.04% (Maximum), Tensile strength=> 490 N/mm2 , Yield strength =>296 N/mm2, Elongation =15% (Minimum) including all taxes, freights, incidental charges etc. complete as per direction of the Engineer -in- charge. U-shape, hot- rolled steel sheet pile width= 400mm to 600mm: height=>100mm, Thickness>=10.5mm. (±0.50mm)	Mton	111.720	110000.001	One Lakh Ten Thousand point Zero Zero One	12289200.112	One Crore Twenty-Two Lakh Eighty-Nine Thousand Two Hundred point One One Two
8	8	8	Cutting of steel sheet piles to design and length and shape as per requirement in design and drawing and as per direction of Engineer in charge. Upto 10mm thick.	m	475.320	44.001	Forty-Four point Zero Zero One	20914.555	Twenty Thousand Nine Hundred and Fourteen point Five Five Five
			Jointing steel sheet piles of different thickness by welding						One Lakh

9	9	9	different thickness by welding to increase the length of pile as per requirement including necessary modification of the ends to receive the weld, supply of welding materials, equipments and other accessories as per specification and direction of Engineer in charge.	m	148.580	961.001	Nine Hundred and Sixty-One point Zero Zero One	142785.529	Forty-Two Thousand Seven Hundred and Eighty-Five point Five Two Nine
10	10	10	Construction of sump well with dug holes of size 1.80m x 2.0m, laying in position the perforated empty diesel/petrol drum sheet of 1.00m dia to a depth 1.5m having slot area of 1000 sq.cm/sqm, slot dia being 30mm each with supply of necessary shrouding materials comprising of 60% 40mm down graded khoa and 40% coarse sand of FM>=2.50 and placing those around and beneath the drum sheet having thickness of 40cm and 50cm respectively including necessary welding, fitting etc. complete as per direction of Engineer in charge.	each	20.000	18256.001	Eighteen Thousand Two Hundred and Fifty-Six point Zero Zero One	365120.020	Three Lakh Sixty-Five Thousand One Hundred and Twenty point Zero Two
11	11	11	Driving steel sheet piles of various sections and weights of any type of soil, by monkey hammer including handling and placing in position, staging and supplying of all equipments like monkey hammer, pully, rope, bamboo, bullah etc. including correcting leaning beyond tolerance & other defects and any other incidental cost etc. complete (measurement will be taken on projected width x height) as per direction of Engineer in charge. U-type or any other type: Upto 4.50m depth.	sqm	848.460	1594.001	One Thousand Five Hundred and Ninety-Four point Zero Zero One	1352446.088	Thirteen Lakh Fifty-Two Thousand Four Hundred and Forty-Six point Zero Eight Eight
12	12	12	Provide 1 (one) coat of Zinc phosphate as primary coat and 2 (two) coat of coaltar epoxy coat over primary coat to steel surface with paint of approved colour etc. complete including the cost of all materials as per direction of Engineer in charge.	sqm	3170.160	236.001	Two Hundred and Thirty-Six point Zero Zero One	748160.930	Seven Lakh Forty-Eight Thousand One Hundred and Sixty point Nine Three
13	13	13	Supplying and placing 20mm thick hessian cloth impregnated with bitumen in expansion joints or on top of sheet piles as per specification and direction of Engineer in charge.	sqm	309.855	495.001	Four Hundred and Ninety-Five point Zero Zero One	153378.535	One Lakh Fifty-Three Thousand Three Hundred and Seventy-Eight point Five Three Five
14	14	14	Supplying and laying single layer pholythene sheet in floor below cement concrete, RCC slab, on walls etc. complete in all respect as per direction of Engineer in charge.	sqm	1892.874	31.001	Thirty-One point Zero Zero One	58680.987	Fifty-Eight Thousand Six Hundred and Eighty point Nine

			Weighing minimum 1.0 kg per 6.50 sqm						Eight Seven
15	15	15	Cement concrete work in leanest mix. 1:3:6 with sand of FM>= 1.5, in foundation or floor, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in position, consolidation to levels, curing, including supply of all materials, excluding the cost of formworks etc. complete as per direction of Engineer in charge. With 25mm down graded Stone Chips	cum	272.314	11061.001	Eleven Thousand AND Sixty-One point Zero Zero One	3012065.426	Thirty Lakh Twelve Thousand AND Sixty-Five point Four Two Six
16	16	16	Cement concrete work in leanest mix. 1:4:8, with sand of FM>= 1.5, in foundation or floor, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in position, consolidation to levels, curing, including supply of all materials, excluding the cost of formworks etc. complete as per direction of Engineer in charge. With 25mm down graded Stone chips.	cum	25.062	10614.001	Ten Thousand Six Hundred and Fourteen point Zero Zero One	266008.093	Two Lakh Sixty-Six Thousand AND Eight point Zero Nine Three
17	17	17	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Footing, footing beams, girder beams, foundation slab with 60-80mm dia barrack bamboo props.	sqm	1202.928	870.001	Eight Hundred and Seventy point Zero Zero One	1046548.563	Ten Lakh Forty-Six Thousand Five Hundred and Forty-Eight point Five Six Three
18	18	18	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Vertical and inclined walls,	sqm	3619.370	1078.001	One Thousand AND Seventy-Eight point Zero Zero One	3901684.479	Thirty-Nine Lakh One Thousand Six Hundred and Eighty-Four point Four Seven Nine

			columns, piers with 60-80mm dia barrack bamboo props.						
19	19	19	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Deck slab, operating deck slab, top slab of barrel upto 3.5m height with 60-80mm dia barrack bamboo props.	sqm	40.340	1091.001	One Thousand AND Ninety-One point Zero Zero One	44010.980	Forty-Four Thousand AND Ten point Nine Eight
20	20	20	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Deck slab, operating deck slab, top slab of barrel above 3.5m upto 6.5m height with 50mm dia GI pipe props.	sqm	41.400	1591.001	One Thousand Five Hundred and Ninety-One point Zero Zero One	65867.441	Sixty-Five Thousand Eight Hundred and Sixty-Seven point Four Four One
21	21	21	Supplying and filling sand in foundation of hydraulic structures, buildings and in protective works with selected sand, in 150mm thick layer, including levelling, dressing, ramming, watering etc. complete (compacted to 50% relative density by manual labour using mallet/vibro compactor) as per direction of Engineer in charge. sand of FM \geq 1.50	cum	4294.905	1089.001	One Thousand AND Eighty-Nine point Zero Zero One	4677155.840	Forty-Six Lakh Seventy-Seven Thousand One Hundred and Fifty-Five point Eight Four
22	22	22	Reinforced cement concrete work in leanest mix. 1:1.5:3, with 20mm down graded coarse aggregates and sand of FM >2.0 to FM ≤ 2.5 , to attain a minimum 28 day cylinder strength of 22.0 N/mm ² , including breaking, screening, grading, washing aggregates with clean water, mixing, laying in forms, consolidation to levels, curing, including supply of all materials, excluding cost	cum	1587.221	12708.001	Twelve Thousand Seven Hundred and Eight point Zero Zero One	20170406.055	Two Crore One Lakh Seventy Thousand Four Hundred and Six point Zero

			of M.S. work for reinforcements and formworks etc. complete and as per direction of Engineer in charge. With stone chips						Five Five
23	23	23	M.S. Work for reinforcement with deformed M.S. bar, fy = 400 N/mm ² , (made from billet) in RCC works, including local handling, cutting, forging, bending, cleaning and fabrication with supply of deformed M.S. bar in different sizes and binding with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge. 8mm dia to 30mm dia.	kg	164626.829	94.001	Ninety-Four point Zero One	15475086.553	One Crore Fifty-Four Lakh Seventy-Five Thousand AND Eighty-Six point Five Five Three
24	24	24	Supply and fitting and fixing 23cm wide P.V.C water stops having minimum strength of 13.80 N/mm ² at 225% elongation and of approved quality in contraction and expansion joints with necessary arrangements for modification in shuttering and keeping the water stop in position etc. complete as per design, specification and direction of Engineer in charge. 3 bulb type	m	46.000	1152.001	One Thousand One Hundred and Fifty-Two point Zero One	52992.046	Fifty-Two Thousand Nine Hundred and Ninety-Two point Zero Four Six
25	25	25	Supplying and laying dry 1st class or pick jhama chips as filter in two layers (top and bottom) as per specific size, range and gradation, including breaking chips, grading, preparation of surface, compacting each layer etc. complete with supply of all materials and as per direction of Engineer in charge. Well graded between 40mm to 20mm size.	cum	508.873	4231.001	Four Thousand Two Hundred and Thirty-One point Zero One	2153042.172	Twenty-One Lakh Fifty-Three Thousand AND Forty-Two point One Seven Two
26	26	26	Supplying and laying dry 1st class or pick jhama chips as filter in two layers (top and bottom) as per specific size, range and gradation, including breaking chips, grading, preparation of surface, compacting each layer etc. complete with supply of all materials and as per direction of Engineer in charge. Well graded between 20mm to 5mm size.	cum	508.873	4656.001	Four Thousand Six Hundred and Fifty-Six point Zero One	2369313.197	Twenty-Three Lakh Sixty-Nine Thousand Three Hundred and Thirteen point One Nine Seven
27	27	27	Supplying and laying sand as filter layers as per specific size ranges and gradation including preparation of surface, compacting in layer etc. complete with supply of all materials and as per direction of Engineer in charge. FM : 1.5 to 2.0	cum	490.355	1139.001	One Thousand One Hundred and Thirty-Nine point Zero One	558514.835	Five Lakh Fifty-Eight Thousand Five Hundred and Fourteen point Eight Three Five
			Supplying and laying sand as filter layers as per specific size				Nine		Four Lakh Twenty-Four

28	28	28	ranges and gradation including preparation of surface, compacting in layer etc. complete with supply of all materials and as per direction of Engineer in charge. FM : 1.00to 1.50	cum	456.954	930.001	Hundred and Thirty point Zero Zero One	424967.677	Thousand Nine Hundred and Sixty-Seven point Six Seven Seven
29	29	29	Back filling in hydraulic structures including all leads and lifts in 150mm layer including watering, ramming compacting to 30% relative density etc. complete by compactor or any other suitable method as per direction of Engineer in charge. Sand of FM>= 0.80	cum	4750.230	788.001	Seven Hundred and Eighty-Eight point Zero Zero One	3743185.990	Thirty-Seven Lakh Forty-Three Thousand One Hundred and Eighty-Five point Nine Nine
30	30	30	Manufacturing and supplying C.C. blocks in leanest mix. 1:3:6, with cement, sand (FM>=1.5) and Stone Chips (40mm down graded), to attain a minimum 28 days cylinder strength of 9.0 N/mm ² including grading, washing stone chips, mixing, laying in forms, consolidation, curing for at least 21 days, including preparation of platform, shuttering and stacking in measurable stacks etc complete including supply of all materials (steel shutter to be used) as per direction of Engineer in charge. block size 40cmx40cmx20cm	each	44333.000	386.001	Three Hundred and Eighty-Six point Zero Zero One	17112582.333	One Crore Seventy-One Lakh Twelve Thousand Five Hundred and Eighty-Two point Three Three Three
31	31	31	Manufacturing and supplying C.C. blocks in leanest mix. 1:3:6, with cement, sand (FM>=1.5) and Stone Chips (40mm down graded), to attain a minimum 28 days cylinder strength of 9.0 N/mm ² including grading, washing stone chips, mixing, laying in forms, consolidation, curing for at least 21 days, including preparation of platform, shuttering and stacking in measurable stacks etc complete including supply of all materials (steel shutter to be used) as per direction of Engineer in charge. block size 30cmx30cmx30cm	each	35241.000	321.001	Three Hundred and Twenty-One point Zero Zero One	11312396.241	One Crore Thirteen Lakh Twelve Thousand Three Hundred and Ninety-Six point Two Four One
32	32	32	Labour charge for protective works in laying C.C. blocks of different sizes including preparation of base, watering and ramming of base etc. complete as per direction of the Engineer in charge. Within 200m	cum	2003.518	1384.001	One Thousand Three Hundred and Eighty-Four point Zero Zero One	2772870.916	Twenty-Seven Lakh Seventy-Two Thousand Eight Hundred and Seventy point Nine One Six
			Labour charge for protective				Two		Nine Lakh Six

33	33	33	Labour charge for protective works in laying C.C. blocks of different sizes including preparation of base, watering and ramming of base etc. complete as per direction of the Engineer in charge. Beyond 200m	cum	366.625	2472.001	Thousand Four Hundred and Seventy-Two point Zero One	906297.367	Thousand Two Hundred and Ninety-Seven point Three Six Seven
34	34	34	Supplying and placing non-woven needle punched type geotextile fabric (100% Polypropylene Fabric, unit weight : 855 Kg/m3 to 946 Kg/m3) as filter materials of elongation at maximum force machine direction (MD) >=60% and <= 100 % , elongation at maximum force (CMD) => 40% and <= 100% ,horizontal and vertical permeability (under 2 kn/m² pressure)=>2x10E-3 m/sec. for effective erosion protection in hydraulic structures/river training works including local handling, placing in position, providing machine seamed joints (with 100% polypropylene or nylon thread) or 35cm lap in dry condition or minimum 100cm lap under water including protecting the geotextile material from UV ray and from any other damages including supply of all materials, labours, equipment's etc. complete as per direction of Engineer in charge. (Geotextile delivered at site should be certified by ISO and clearly labelled with brand name and grade printed at regular intervals across the body of the fabric). Mass =>300 gm/m², thickness(Under 2 kpa pressure) =>2.00mm, EoS<=0.11mm, strip tensile strength =>15kn/m, grab strength =>850N, CBR puncture resistance =>2200N.	sqm	8784.695	209.001	Two Hundred and Nine point Zero One	1836010.040	Eighteen Lakh Thirty-Six Thousand AND Ten point Zero Four
35	35	35	M.S. Work for reinforcement with plain M.S. bar, fy=300 N/mm², (made from billet) in RCC works, including local handling, cutting, forging, bending, cleaning and fabrication with supply of plain round M.S. bar in different sizes and binding with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge. 6mm dia.	kg	68.400	83.001	Eighty-Three point Zero One	5677.268	Five Thousand Six Hundred and Seventy-Seven point Two Six Eight
36	36	36	Manufacturing, supplying and Installation of Hand Wheel type lifting device for slide gate with 63mm dia steel shaft, 108mm outer dia bronze nut taper roller bearing SKF-50216 etc. as per approved design including supply of all components,	each	3.000	50921.001	Fifty Thousand Nine Hundred and Twenty	152763.003	One Lakh Fifty-Two Thousand Seven Hundred and Sixty-

			labours with a prime coat of redoxide where necessary etc. complete including the cost of all materials as per specification and direction of Engineer in charge.				Twenty-One point Zero Zero One		Three point Zero Zero Three
37	37	37	Earth work by manual labour in resectioning of embankment/ canal bank/river slopes/ road/ compound etc. manually compacted by 7.0 kg iron rammer to avoid any air pocket in clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) within the initial lead of 30m and all lifts including throwing the spoils to profile in layers not exceeding 150mm thickness with clod breaking to a maximum size of 100mm, removing roots & stumps of trees of girth upto 200mm from the ground, benching the side slopes, stripping/ ploughing the base of embankment and borrowpit areas, dug bailing, bail out of water, rough dressing including 150mm cambering at the centre of the crest (where necessary) etc. complete as per direction of Engineer in charge. 0 m to 3.00 m height	cum	15774.600	231.001	Two Hundred and Thirty-One point Zero Zero One	3643948.375	Thirty-Six Lakh Forty-Three Thousand Nine Hundred and Forty-Eight point Three Seven Five
38	38	38	Earth work by manual labour in resectioning of embankment/ canal bank/river slopes/ road/ compound etc. manually compacted by 7.0 kg iron rammer to avoid any air pocket in clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) within the initial lead of 30m and all lifts including throwing the spoils to profile in layers not exceeding 150mm thickness with clod breaking to a maximum size of 100mm, removing roots & stumps of trees of girth upto 200mm from the ground, benching the side slopes, stripping/ ploughing the base of embankment and borrowpit areas, dug bailing, bail out of water, rough dressing including 150mm cambering at the centre of the crest (where necessary) etc. complete as per direction of Engineer in charge. 0m to 4.00m height	cum	42765.350	245.001	Two Hundred and Forty-Five point Zero Zero One	10477553.515	One Crore Four Lakh Seventy-Seven Thousand Five Hundred and Fifty-Three point Five One Five
39	39	39	Extra rate for every additional lead of 15m or part thereof beyond the initial lead of 30m upto a maximum of 19 leads (3m neglected) for all kinds of earth work. 3 nos lead	pldcum	42765.350	78.001	Seventy-Eight point Zero Zero One	3335740.065	Thirty-Three Lakh Thirty-Five Thousand Seven Hundred and Forty point Zero Six Five
			Earth work by Mechanical Excavator (Long Boom) in all						Thirty-

40	40	40	Excavator (Long Boom) in all kinds of soil in excavation / re-excavation of channel/canal/khal etc. Including disposal of spoil-soil upto 30m away from the point of excavation with rough dressing and levelling etc. complete as per direction of Engineer-in-Charge.	cum	29072.040	122.001	One Hundred and Twenty-Two point Zero Zero One	3546817.952	Five Lakh Forty-Six Thousand Eight Hundred and Seventeen point Nine Five Two
41	41	41	Earth work by manual labour in constructing/ resectioning of embankment/ canal bank/ road etc. with clayey soil(minimum 30% clay, 0-40% silt and 0-30% sand) within the initial lead of 30m, and all lifts including throwing the spoils to profiles in layers not exceeding 150mm in thickness, clod breaking upto a maximum size of 100mm, benching the side slopes, stripping/ ploughing the base of embankment and borrow pit area, dug bailing, cutting trees upto 200mm girth, with uprooting stumps, clearing jungles, bailing out water, rough dressing and 150mm cambering at the centre of the crest etc. complete as per specification and direction of Engineer in charge. 0 to 4 m height.	cum	7540.140	203.001	Two Hundred and Three point Zero Zero One	1530655.960	Fifteen Lakh Thirty Thousand Six Hundred and Fifty-Five point Nine Six
42	42	42	Earth work by manual labour with clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) in construction of cross bundh/ring bundh as per design and specification with all leads and lifts, throwing the earth in layers not exceeding 150mm in thickness, including breaking clods, rough dressing, clearing the jungle, removing stumps, dug bailing and 75mm cambering etc. complete as per direction of Engineer in charge.	cum	34654.292	175.001	One Hundred and Seventy-Five point Zero Zero One	6064535.754	Sixty Lakh Sixty-Four Thousand Five Hundred and Thirty-Five point Seven Five Four
43	43	43	Back filling in hydraulic structures and slope building in protective works including all leads and lifts with selected local soil in layer of 150mm including watering, ramming etc. complete compacted to 20% relative density by compactor or any other suitable method as per direction of Engineer in charge.	cum	13208.537	191.001	One Hundred and Ninety-One point Zero Zero One	2522843.776	Twenty-Five Lakh Twenty-Two Thousand Eight Hundred and Forty-Three point Seven Seven Six
44	44	44	Earth work by manual labour in all kinds of soil in removing the cross bundh/ring bundh, including all leads and lifts complete and placing the spoils to a safe distance, (minimum 15m apart from the bank) as per direction of Engineer in charge.	cum	5432.057	175.001	One Hundred and Seventy-Five point Zero Zero One	950615.407	Nine Lakh Fifty Thousand Six Hundred and Fifteen point Four Zero Seven
			M.S. Work in plates, angles, channels, flat bars, Tees etc.						

45	45	45	channels, flat bars, tees etc. including fabricating, machining, cutting, bending, welding, forging, drilling, retvetting, embedding anchor bars, staging and fitting, fixing, local handling etc. complete with energy consumption and supply of labours including the cost of materials as per design, specification and direction of Engineer in charge.	kg	4945.500	157.001	One Hundred and Fifty-Seven point Zero One	776448.446	Seven Lakh Seventy-Six Thousand Four Hundred and Forty-Eight point Four Four Six
46	46	46	Manufacturing & Supplying of M.S. Vertical Lift Gate shutter of 8mm thick M.S. skin plate and stiffener with minimum 75mmx75mmx10mm M.S. angle as frame, horizontal & vertical beam, 75mmx25mmx12mm P-type rubber seal, fixed with 10mm dia x 63.5mm M.S. counter shank bolts with nuts and 40mmx10mm M.S. strip as clamp drilled spaces @ 150mm c/c, stem attachment with proper thread, nut, cotter pin and washer as per approved design including the cost of all materials of proper grade & brand new with a prime coat of redoxide where necessary as per specification and direction of Engineer in charge. Size 1.95m x 1.65m.	each	3.000	107289.001	One Lakh Seven Thousand Two Hundred and Eighty-Nine point Zero One	321867.003	Three Lakh Twenty-One Thousand Eight Hundred and Sixty-Seven point Zero Zero Three
47	47	47	Labour charge for fitting and fixing of M.S. vertical lift gate/ flap gate shutters of different size including making holes in concrete for hooking arrangements with supply of necessary materials, tools and other accessories required for fitting the same to regulator/sluice and mending the damages with CC (1:2:4), removing the spoils etc. complete including the cost of all materials as per direction of Engineer in charge. Size 1.95m x 1.35m or 1.95m x 1.65m.	each	3.000	12145.001	Twelve Thousand One Hundred and Forty-Five point Zero One	36435.003	Thirty-Six Thousand Four Hundred and Thirty-Five point Zero Zero Three
48	48	48	Supplying pressure treated wooden fall boards/stop logs of different sizes (not less than 15cm in depth) of sal, sundari, garjan, shishu or equivalent for regulator/ sluices, including fixing in position with eye hook etc. complete as per direction of Engineer in charge.	cum	2.484	90836.001	Ninety Thousand Eight Hundred and Thirty-Six point Zero One	225636.626	Two Lakh Twenty-Five Thousand Six Hundred and Thirty-Six point Six Two Six
49	49	49	Supplying, laying fitting and fixing of different dia G.I. pipes with all special fittings, such as bends, elbows, sockets, tees, unions, jamnuts etc. including cutting foundation trenches upto required depth where necessary and filling the same with earth duly compacted, making holes in floors and walls	m	80.000	321.001	Three Hundred and Twenty-One point	25680.080	Twenty-Five Thousand Six Hundred and Eighty

[illegible]

55	55	55	Demobilization and clean-up of the site upon completion of the works, as per Specifications and Contractor's Method Statement and as per direction of Engineer in Charge.	LS	1.000	112344.001	Lakh Twelve Thousand Three Hundred and Forty-Four point Zero Zero One	112344.001	One Lakh Twelve Thousand Three Hundred and Forty-Four point Zero Zero One
56	56	56	Providing and maintaining adequate portable water supply by installing 6 Nos. of tube well and sanitation facilities by installing 6 Nos. of sanitary latrines for usage of labours, officials and others for prevailing the hygienic and healthy environment at all over the working site As per direction of the Engineer in charge.	LS	1.000	111148.001	One Lakh Eleven Thousand One Hundred and Forty-Eight point Zero Zero One	111148.001	One Lakh Eleven Thousand One Hundred and Forty-Eight point Zero Zero One
57	57	57	Mobilize, strengthen required land based construction equipment such as excavator, dump truck, chain dozer, vibro-compactor, and plants such as generator for site electrification, digital camera for taking photographs and digital video camera for recording/Taking photograph all sequences of works etc for keeping records of the Works by providing following information including transfer to site, complete for the purposes stated in the Technical Specification and Contractor's Method Statement and as per direction of Engineer in charge.	LS	1.000	92026.001	Ninety-Two Thousand AND Twenty-Six point Zero Zero One	92026.001	Ninety-Two Thousand AND Twenty-Six point Zero Zero One
58	58	58	Operate, maintain of plant and equipment such as generator for site electrification, for the purpose stated in the Technical Specification and in the Contractor's Method Statement and as per direction of Engineer in charge.	LS	1.000	110909.001	One Lakh Ten Thousand Nine Hundred and Nine point Zero Zero One	110909.001	One Lakh Ten Thousand Nine Hundred and Nine point Zero Zero One
							Grand Total:	159327961.966	Fifteen Crore Ninety-Three Lakh Twenty-Seven Thousand Nine Hundred and Sixty-One point Nine Six Six

This Bill of Quantities is Electronically Signed by Mr. Md. Aatur on behalf of Aatur Rahman Khan Ltd.- Ashim Singh JV

Bill of Quantities

Bill of Quantities									
Item no.	Group	Item Code (if any)	Description of Item	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In Words (BDT)	Total Price In Figures (BDT)	Total Price In Words (BDT)
1	1	1	Construction of B.M. Pillars at site with first class bricks in cement mortar (1:4) of size 38cm x 38cm x 75cm on cement concrete (1:2:4) base of size 50cm x 50cm x 7.5cm with 12mm thick cement plastering (1:2) on exposed surfaces of pillar and cement mortar on top (1:2), with inscription of "BWDB" with 25cm of the pillar below ground level etc. complete including ramming the backfill and the cost of all materials as per direction of Engineer in charge.	each	16.000	1323.001	One Thousand Three Hundred and Twenty-Three point Zero Zero One	21168.016	Twenty-One Thousand One Hundred and Sixty-Eight point Zero One Six
2	2	2	Site preparation by manually removing all miscellaneous objectional materials from entire site and removing soil upto 15cm depth including uprooting stumps, jungle clearing, levelling dressing etc. complete as per direction of Engineer in charge.	sqm	79500.000	27.001	Twenty-Seven point Zero Zero One	2146579.500	Twenty-One Lakh Forty-Six Thousand Five Hundred and Seventy-Nine point Five
3	3	3	Earth work in excavation of foundation trenches in all kinds of soils as per layout plan of foundation excavation with all leads and lifts and placing the spoil earth for constructing the ring bundh/ cofferdam where necessary as per design and specification or disposing it to a safe distance including pushing, levelling, dressing, etc. complete as per direction of Engineer in charge. For moving spoil earth upto a distance of 100m from the centre of the pit.	cum	31621.098	243.001	Two Hundred and Forty-Three point Zero Zero One	7683958.435	Seventy-Six Lakh Eighty-Three Thousand Nine Hundred and Fifty-Eight point Four Three Five
4	4	4	Installation of pizeometer including supply of 40mm G.I. pipe, brass strainer, socket, labour, by wash boring, lowering, fixing the elevation and providing cover on the top of the well etc. complete as per direction of Engineer in charge.	each	8.000	3121.001	Three Thousand One Hundred and Twenty-One point Zero Zero One	24968.008	Twenty-Four Thousand Nine Hundred and Sixty-Eight point Zero Zero Eight
5	5	5	Shoring for slope protection of foundation trench, canal, embankment, road, pond etc. as per design slopes, grades including removal of spoils to a safe distance as per direction of Engineer in charge. By bamboo post of 6.0m length, 60mm to 80mm dia, 20cm c/c driven 2.0m below ground, with drum sheet walling	sqm	1130.400	806.001	Eight Hundred and Six point Zero Zero One	911103.530	Nine Lakh Eleven Thousand One Hundred and Three point Five Three

			and average 70mm dia half split bamboo batten @ 2.0m c/c fixed with nails.						
6	6	6	Bailing out of water with all leads and lifts by manual labour or pump, with all arrangements for protection of ring bund and side slopes of foundation pit against erosion or washout etc. complete (actual volume of work will be measured by sounding method before starting the work) as per direction of Engineer in charge. by pump.	cum	277283.791	5.101	Five point One Zero One	1414424.618	Fourteen Lakh Fourteen Thousand Four Hundred and Twenty-Four point Six One Eight
7	7	7	Supplying at site U-shape hot rolled steel sheet pile of different section of Phosphorus=0.04%(Maximum), Sulphur = 0.04% (Maximum), Tensile strength=> 490 N/mm2 , Yield strength =>296 N/mm2, Elongation =15% (Minimum) including all taxes, freights, incidental charges etc. complete as per direction of the Engineer -in- charge. U-shape, hot- rolled steel sheet pile width= 400mm to 600mm: height=>100mm, Thickness>=10.5mm. (±0.50mm)	Mton	111.720	131700.001	One Lakh Thirty-One Thousand Seven Hundred point Zero One	14713524.112	One Crore Forty-Seven Lakh Thirteen Thousand Five Hundred and Twenty-Four point One One Two
8	8	8	Cutting of steel sheet piles to design and length and shape as per requirement in design and drawing and as per direction of Engineer in charge. Upto 10mm thick.	m	475.320	44.001	Forty-Four point Zero One	20914.555	Twenty Thousand Nine Hundred and Fourteen point Five Five Five
9	9	9	Jointing steel sheet piles of different thickness by welding to increase the length of pile as per requirement including necessary modification of the ends to receive the weld, supply of welding materials, equipments and other accessories as per specification and direction of Engineer in charge.	m	148.580	961.001	Nine Hundred and Sixty-One point Zero One	142785.529	One Lakh Forty-Two Thousand Seven Hundred and Eighty-Five point Five Two Nine
10	10	10	Construction of sump well with dug holes of size 1.80m x 2.0m, laying in position the perforated empty diesel/petrol drum sheet of 1.00m dia to a depth 1.5m having slot area of 1000 sq.cm/sqm, slot dia being 30mm each with supply of necessary shrouding materials comprising of 60% 40mm down graded khoa and 40% coarse sand of FM>=2.50 and placing those around and beneath the drum sheet having thickness of 40cm and 50cm respectively including necessary welding, fitting etc. complete as per direction of Engineer in charge.	each	20.000	18257.001	Eighteen Thousand Two Hundred and Fifty-Seven point Zero One	365140.020	Three Lakh Sixty-Five Thousand One Hundred and Forty point Zero Two
			Driving steel sheet piles of various sections and weights of any type of soil by monkey						

11	11	11	any type of soil, by monkey hammer including handling and placing in position, staging and supplying of all equipments like monkey hammer, pully, rope, bamboo, bullah etc. including correcting leaning beyond tolerance & other defects and any other incidental cost etc. complete (measurement will be taken on projected width x height) as per direction of Engineer in charge. U-type or any other type: Upto 4.50m depth.	sqm	848.460	1595.001	One Thousand Five Hundred and Ninety-Five point Zero Zero One	1353294.548	Thirteen Lakh Fifty-Three Thousand Two Hundred and Ninety-Four point Five Four Eight
12	12	12	Provide 1 (one) coat of Zinc phosphate as primary coat and 2 (two) coat of coaltar epoxy coat over primary coat to steel surface with paint of approved colour etc. complete including the cost of all materials as per direction of Engineer in charge.	sqm	3170.160	236.001	Two Hundred and Thirty-Six point Zero Zero One	748160.930	Seven Lakh Forty-Eight Thousand One Hundred and Sixty point Nine Three
13	13	13	Supplying and placing 20mm thick hessian cloth impregnated with bitumen in expansion joints or on top of sheet piles as per specification and direction of Engineer in charge.	sqm	309.855	496.001	Four Hundred and Ninety-Six point Zero Zero One	153688.390	One Lakh Fifty-Three Thousand Six Hundred and Eighty-Eight point Three Nine
14	14	14	Supplying and laying single layer polythene sheet in floor below cement concrete, RCC slab, on walls etc. complete in all respect as per direction of Engineer in charge. Weighing minimum 1.0 kg per 6.50 sqm	sqm	1892.874	31.001	Thirty-One point Zero Zero One	58680.987	Fifty-Eight Thousand Six Hundred and Eighty point Nine Eight Seven
15	15	15	Cement concrete work in leanest mix. 1:3:6 with sand of FM \geq 1.5, in foundation or floor, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in position, consolidation to levels, curing, including supply of all materials, excluding the cost of formworks etc. complete as per direction of Engineer in charge. With 25mm down graded Stone Chips	cum	272.314	11950.001	Eleven Thousand Nine Hundred and Fifty point Zero Zero One	3254152.572	Thirty-Two Lakh Fifty-Four Thousand One Hundred and Fifty-Two point Five Seven Two
16	16	16	Cement concrete work in leanest mix. 1:4:8, with sand of FM \geq 1.5, in foundation or floor, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in position, consolidation to levels, curing, including supply of all materials, excluding the cost of formworks etc. complete as per direction of Engineer in charge. With 25mm down graded	cum	25.062	11800.001	Eleven Thousand Eight Hundred point Zero Zero One	295731.625	Two Lakh Ninety-Five Thousand Seven Hundred and Thirty-One point Six Two Five

			Stone chips.						
17	17	17	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Footing, footing beams, girder beams, foundation slab with 60-80mm dia barrack bamboo props.	sqm	1202.928	871.001	Eight Hundred and Seventy-One point Zero Zero One	1047751.491	Ten Lakh Forty-Seven Thousand Seven Hundred and Fifty-One point Four Nine One
18	18	18	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Vertical and inclined walls, columns, piers with 60-80mm dia barrack bamboo props.	sqm	3619.370	1079.001	One Thousand AND Seventy-Nine point Zero Zero One	3905303.849	Thirty-Nine Lakh Five Thousand Three Hundred and Three point Eight Four Nine
19	19	19	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Deck slab, operating deck slab, top slab of barrel upto 3.5m height with 60-80mm dia barrack bamboo props.	sqm	40.340	1092.001	One Thousand AND Ninety-Two point Zero Zero One	44051.320	Forty-Four Thousand AND Fifty-One point Three Two
			Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with						

20	20	20	<p>R.I. bar stainer, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge.</p> <p>Deck slab, operating deck slab, top slab of barrel above 3.5m upto 6.5m height with 50mm dia GI pipe props.</p>	sqm	41.400	1592.001	One Thousand Five Hundred and Ninety-Two point Zero Zero One	65908.841	Sixty-Five Thousand Nine Hundred and Eight point Eight Four One
21	21	21	<p>Supplying and filling sand in foundation of hydraulic structures, buildings and in protective works with selected sand, in 150mm thick layer, including levelling, dressing, ramming, watering etc. complete (compacted to 50% relative density by manual labour using mallet/vibro compactor) as per direction of Engineer in charge.</p> <p>sand of FM\geq 1.50</p>	cum	4294.905	763.001	Seven Hundred and Sixty-Three point Zero Zero One	3277016.810	Thirty-Two Lakh Seventy-Seven Thousand AND Sixteen point Eight One
22	22	22	<p>Reinforced cement concrete work in leanest mix. 1:1.5:3, with 20mm down graded coarse aggregates and sand of FM>2.0 to FM≤ 2.5, to attain a minimum 28 day cylinder strength of 22.0 N/mm², including breaking, screening, grading, washing aggregates with clean water, mixing, laying in forms, consolidation to levels, curing, including supply of all materials, excluding cost of M.S. work for reinforcements and formworks etc. complete and as per direction of Engineer in charge.</p> <p>With stone chips</p>	cum	1587.221	13830.001	Thirteen Thousand Eight Hundred and Thirty point Zero Zero One	21951268.017	Two Crore Nineteen Lakh Fifty-One Thousand Two Hundred and Sixty-Eight point Zero One Seven
23	23	23	<p>M.S. Work for reinforcement with deformed M.S. bar, fy = 400 N/mm², (made from billet) in RCC works, including local handling, cutting, forging, bending, cleaning and fabrication with supply of deformed M.S. bar in different sizes and binding with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge.</p> <p>8mm dia to 30mm dia.</p>	kg	164626.829	92.501	Ninety-Two point Five Zero One	15228146.309	One Crore Fifty-Two Lakh Twenty-Eight Thousand One Hundred and Forty-Six point Three Zero Nine
24	24	24	<p>Supply and fitting and fixing 23cm wide P.V.C water stops having minimum strength of 13.80 N/mm² at 225% elongation and of approved quality in contraction and expansion joints with necessary arrangements for modification in shuttering and keeping the water stop in position etc. complete as per design, specification and</p>	m	46.000	1153.001	One Thousand One Hundred and Fifty-Three point Zero Zero One	53038.046	Fifty-Three Thousand AND Thirty-Eight point Zero Four Six

			direction of Engineer in charge. 3 bulb type						
25	25	25	Supplying and laying dry 1st class or pick jhama chips as filter in two layers (top and bottom) as per specific size, range and gradation, including breaking chips, grading, preparation of surface, compacting each layer etc. complete with supply of all materials and as per direction of Engineer in charge. Well graded between 40mm to 20mm size.	cum	508.873	3597.001	Three Thousand Five Hundred and Ninety-Seven point Zero One	1830416.690	Eighteen Lakh Thirty Thousand Four Hundred and Sixteen point Six Nine
26	26	26	Supplying and laying dry 1st class or pick jhama chips as filter in two layers (top and bottom) as per specific size, range and gradation, including breaking chips, grading, preparation of surface, compacting each layer etc. complete with supply of all materials and as per direction of Engineer in charge. Well graded between 20mm to 5mm size.	cum	508.873	3959.001	Three Thousand Nine Hundred and Fifty-Nine point Zero One	2014628.716	Twenty Lakh Fourteen Thousand Six Hundred and Twenty-Eight point Seven One Six
27	27	27	Supplying and laying sand as filter layers as per specific size ranges and gradation including preparation of surface, compacting in layer etc. complete with supply of all materials and as per direction of Engineer in charge. FM : 1.5 to 2.0	cum	490.355	911.001	Nine Hundred and Eleven point Zero One	446713.895	Four Lakh Forty-Six Thousand Seven Hundred and Thirteen point Eight Nine Five
28	28	28	Supplying and laying sand as filter layers as per specific size ranges and gradation including preparation of surface, compacting in layer etc. complete with supply of all materials and as per direction of Engineer in charge. FM : 1.00to 1.50	cum	456.954	744.001	Seven Hundred and Forty-Four point Zero One	339974.233	Three Lakh Thirty-Nine Thousand Nine Hundred and Seventy-Four point Two Three Three
29	29	29	Back filling in hydraulic structures including all leads and lifts in 150mm layer including watering, ramming compacting to 30% relative density etc. complete by compactor or any other suitable method as per direction of Engineer in charge. Sand of FM>= 0.80	cum	4750.230	552.001	Five Hundred and Fifty-Two point Zero One	2622131.710	Twenty-Six Lakh Twenty-Two Thousand One Hundred and Thirty-One point Seven One
30	30	30	Manufacturing and supplying C.C. blocks in leanest mix. 1:3:6, with cement, sand (FM>=1.5) and Stone Chips (40mm down graded), to attain a minimum 28 days cylinder strength of 9.0 N/mm ² including grading, washing stone chips, mixing, laying in forms, consolidation, curing for at	each	44333.000	405.001	Four Hundred and Five	17954000.333	One Crore Seventy-Nine Lakh Fifty-Four Thousand Nine

30	30	30	consolidation, curing for at least 21 days, including preparation of platform, shuttering and stacking in measurable stacks etc complete including supply of all materials (steel shutter to be used) as per direction of Engineer in charge. block size 40cmx40cmx20cm	each	44333.000	403.001	point Zero Zero One	17934909.333	Nine Hundred and Nine point Three Three Three
31	31	31	Manufacturing and supplying C.C. blocks in leanest mix. 1:3:6, with cement, sand (FM>=1.5) and Stone Chips (40mm down graded), to attain a minimum 28 days cylinder strength of 9.0 N/mm² including grading, washing stone chips, mixing, laying in forms, consolidation, curing for at least 21 days, including preparation of platform, shuttering and stacking in measurable stacks etc complete including supply of all materials (steel shutter to be used) as per direction of Engineer in charge. block size 30cmx30cmx30cm	each	35241.000	342.001	Three Hundred and Forty- Two point Zero Zero One	12052457.241	One Crore Twenty Lakh Fifty-Two Thousand Four Hundred and Fifty- Seven point Two Four One
32	32	32	Labour charge for protective works in laying C.C. blocks of different sizes including preparation of base, watering and ramming of base etc. complete as per direction of the Engineer in charge. Within 200m	cum	2003.518	1108.001	One Thousand One Hundred and Eight point Zero Zero One	2219899.948	Twenty- Two Lakh Nineteen Thousand Eight Hundred and Ninety- Nine point Nine Four Eight
33	33	33	Labour charge for protective works in laying C.C. blocks of different sizes including preparation of base, watering and ramming of base etc. complete as per direction of the Engineer in charge. Beyond 200m	cum	366.625	1978.001	One Thousand Nine Hundred and Seventy- Eight point Zero Zero One	725184.617	Seven Lakh Twenty- Five Thousand One Hundred and Eighty- Four point Six One Seven
34	34	34	Supplying and placing non-woven needle punched type geotextile fabric (100% Polypropylene Fabric, unit weight : 855 Kg/m3 to 946 Kg/m3) as filter materials of elongation at maximum force machine direction (MD) >=60% and <= 100 % , elongation at maximum force (CMD) => 40% and <= 100% ,horizontal and vertical permeability (under 2 kn/m² pressure)=>2x10E-3 m/sec. for effective erosion protection in hydraulic structures/river training works including local handling, placing in position, providing machine seamed joints (with 100% polypropylene or nylon thread) or 35cm lap in dry condition or	cum	8784.605	210.001	Two Hundred and Ten	1844704.735	Eighteen Lakh Forty- Four Thousand Seven Hundred

34	34	34	<p>minimum 100cm lap under water including protecting the geotextile material from UV ray and from any other damages including supply of all materials, labours, equipment's etc. complete as per direction of Engineer in charge. (Geotextile delivered at site should be certified by ISO and clearly labelled with brand name and grade printed at regular intervals across the body of the fabric).</p> <p>Mass =>300 gm/m², thickness(Under 2 kpa pressure) =>2.00mm, EoS<=0.11mm, strip tensile strength =>15kn/m, grab strength =>850N, CBR puncture resistance =>2200N.</p>	Sqm	6704.093	210.001	point Zero Zero One	1844794.733	hundred and Ninety- Four point Seven Three Five
35	35	35	<p>M.S. Work for reinforcement with plain M.S. bar, fy=300 N/mm², (made from billet) in RCC works, including local handling, cutting, forging, bending, cleaning and fabrication with supply of plain round M.S. bar in different sizes and binding with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge. 6mm dia.</p>	kg	68.400	84.001	Eighty- Four point Zero Zero One	5745.668	Five Thousand Seven Hundred and Forty- Five point Six Six Eight
36	36	36	<p>Manufacturing, supplying and Installation of Hand Wheel type lifting device for slide gate with 63mm dia steel shaft, 108mm outer dia bronze nut taper roller bearing SKF-50216 etc. as per approved design including supply of all components, labours with a prime coat of redoxide where necessary etc. complete including the cost of all materials as per specification and direction of Engineer in charge.</p>	each	3.000	50922.001	Fifty Thousand Nine Hundred and Twenty- Two point Zero Zero One	152766.003	One Lakh Fifty-Two Thousand Seven Hundred and Sixty- Six point Zero Zero Three
37	37	37	<p>Earth work by manual labour in resectioning of embankment/ canal bank/river slopes/ road/ compound etc. manually compacted by 7.0 kg iron rammer to avoid any air pocket in clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) within the initial lead of 30m and all lifts including throwing the spoils to profile in layers not exceeding 150mm thickness with clod breaking to a maximum size of 100mm, removing roots & stumps of trees of girth upto 200mm from the ground, benching the side slopes, stripping/ ploughing the base of embankment and borrowpit areas, dug bailing, bail out of water, rough dressing including 150mm cambering at the centre of the crest (where necessary) etc.</p>	cum	15774.600	208.001	Two Hundred and Eight point Zero Zero One	3281132.575	Thirty- Two Lakh Eighty- One Thousand One Hundred and Thirty- Two point Five Seven Five

			complete as per direction of Engineer in charge. 0 m to 3.00 m height						
38	38	38	Earth work by manual labour in resectioning of embankment/ canal bank/river slopes/ road/ compound etc. manually compacted by 7.0 kg iron rammer to avoid any air pocket in clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) within the initial lead of 30m and all lifts including throwing the spoils to profile in layers not exceeding 150mm thickness with clod breaking to a maximum size of 100mm, removing roots & stumps of trees of girth upto 200mm from the ground, benching the side slopes, stripping/ ploughing the base of embankment and borrowpit areas, dug bailing, bail out of water, rough dressing including 150mm cambering at the centre of the crest (where necessary) etc. complete as per direction of Engineer in charge. 0m to 4.00m height	cum	42765.350	221.001	Two Hundred and Twenty-One point Zero Zero One	9451185.115	Ninety-Four Lakh Fifty-One Thousand One Hundred and Eighty-Five point One One Five
39	39	39	Extra rate for every additional lead of 15m or part thereof beyond the initial lead of 30m upto a maximum of 19 leads (3m neglected) for all kinds of earth work. 3 nos lead	pldcum	42765.350	26.001	Twenty-Six point Zero Zero One	1111941.865	Eleven Lakh Eleven Thousand Nine Hundred and Forty-One point Eight Six Five
40	40	40	Earth work by Mechanical Excavator (Long Boom) in all kinds of soil in excavation / re-excavation of channel/canal/khal etc. Including disposal of spoil-soil upto 30m away from the point of excavation with rough dressing and levelling etc. complete as per direction of Engineer-in-Charge.	cum	29072.040	111.001	One Hundred and Eleven point Zero Zero One	3227025.512	Thirty-Two Lakh Twenty-Seven Thousand AND Twenty-Five point Five One Two
41	41	41	Earth work by manual labour in constructing/ resectioning of embankment/ canal bank/ road etc. with clayey soil(minimum 30% clay, 0-40% silt and 0-30% sand) within the initial lead of 30m, and all lifts including throwing the spoils to profiles in layers not exceeding 150mm in thickness, clod breaking upto a maximum size of 100mm, benching the side slopes, stripping/ ploughing the base of embankment and borrow pit area, dug bailing, cutting trees upto 200mm girth, with uprooting stumps, clearing jungles, bailing out water, rough dressing and 150mm cambering at the centre of the crest etc. complete as per specification and direction of	cum	7540.140	203.001	Two Hundred and Three point Zero Zero One	1530655.960	Fifteen Lakh Thirty Thousand Six Hundred and Fifty-Five point Nine Six

			Engineer in charge. 0 to 4 m height.						
42	42	42	Earth work by manual labour with clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) in construction of cross bundh/ring bundh as per design and specification with all leads and lifts, throwing the earth in layers not exceeding 150mm in thickness, including breaking clods, rough dressing, clearing the jungle, removing stumps, dug bailing and 75mm cambering etc. complete as per direction of Engineer in charge.	cum	34654.292	158.001	One Hundred and Fifty-Eight point Zero One	5475412.790	Fifty-Four Lakh Seventy-Five Thousand Four Hundred and Twelve point Seven Nine
43	43	43	Back filling in hydraulic structures and slope building in protective works including all leads and lifts with selected local soil in layer of 150mm including watering, ramming etc. complete compacted to 20% relative density by compactor or any other suitable method as per direction of Engineer in charge.	cum	13208.537	135.001	One Hundred and Thirty-Five point Zero One	1783165.704	Seventeen Lakh Eighty-Three Thousand One Hundred and Sixty-Five point Seven Zero Four
44	44	44	Earth work by manual labour in all kinds of soil in removing the cross bundh/ring bundh, including all leads and lifts complete and placing the spoils to a safe distance, (minimum 15m apart from the bank) as per direction of Engineer in charge.	cum	5432.057	141.001	One Hundred and Forty-One point Zero One	765925.469	Seven Lakh Sixty-Five Thousand Nine Hundred and Twenty-Five point Four Six Nine
45	45	45	M.S. Work in plates, angles, channels, flat bars, Tees etc. including fabricating, machining, cutting, bending, welding, forging, drilling, revetting, embedding anchor bars, staging and fitting, fixing, local handling etc. complete with energy consumption and supply of labours including the cost of materials as per design, specification and direction of Engineer in charge.	kg	4945.500	157.001	One Hundred and Fifty-Seven point Zero One	776448.446	Seven Lakh Seventy-Six Thousand Four Hundred and Forty-Eight point Four Four Six
46	46	46	Manufacturing & Supplying of M.S. Vertical Lift Gate shutter of 8mm thick M.S. skin plate and stiffener with minimum 75mmx75mmx10mm M.S. angle as frame, horizontal & vertical beam, 75mmx25mmx12mm P-type rubber seal, fixed with 10mm dia x 63.5mm M.S. counter shank bolts with nuts and 40mmx10mm M.S. strip as clamp drilled spaces @ 150mm c/c, stem attachment with proper thread, nut, cotter pin and washer as per approved design including the cost of all materials of proper grade & brand new with a prime coat of	each	3.000	107289.001	One Lakh Seven Thousand Two Hundred and Eighty-Nine point Zero One	321867.003	Three Lakh Twenty-One Thousand Eight Hundred and Sixty-Seven point Zero Zero Three

			redoxide where necessary as per specification and direction of Engineer in charge. Size 1.95m x 1.65m.						
47	47	47	Labour charge for fitting and fixing of M.S. vertical lift gate/ flap gate shutters of different size including making holes in concrete for hooking arrangements with supply of necessary materials, tools and other accessories required for fitting the same to regulator/sluice and mending the damages with CC (1:2:4), removing the spoils etc. complete including the cost of all materials as per direction of Engineer in charge. Size 1.95m x 1.35m or 1.95m x 1.65m.	each	3.000	12145.001	Twelve Thousand One Hundred and Forty-Five point Zero Zero One	36435.003	Thirty-Six Thousand Four Hundred and Thirty-Five point Zero Zero Three
48	48	48	Supplying pressure treated wooden fall boards/stop logs of different sizes (not less than 15cm in depth) of sal, sundari, garjan, shishu or equivalent for regulator/ sluices, including fixing in position with eye hook etc. complete as per direction of Engineer in charge.	cum	2.484	90839.001	Ninety Thousand Eight Hundred and Thirty-Nine point Zero Zero One	225644.078	Two Lakh Twenty-Five Thousand Six Hundred and Forty-Four point Zero Seven Eight
49	49	49	Supplying, laying fitting and fixing of different dia G.I. pipes with all special fittings, such as bends, elbows, sockets, tees, unions, jamnuts etc. including cutting foundation trenches upto required depth where necessary and filling the same with earth duly compacted, making holes in floors and walls and mending the damages, fixing in walls with holders and clips, including cutting threads, making necessary connection etc. all complete, and as per direction of Engineer in charge. 40mm dia G.I. pipe line.	m	80.000	321.001	Three Hundred and Twenty-One point Zero Zero One	25680.080	Twenty-Five Thousand Six Hundred and Eighty point Zero Eight
50	50	50	Name Plate & Flag Stand and Accessories etc.	LS	2.000	50000.001	Fifty Thousand point Zero Zero One	100000.002	One Lakh point Zero Zero Two
51	51	51	Earth work by manual labour with clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) for closing breach or channel, with all leads and lifts within the channel width including profiling, clod breaking, ramming etc. complete as per specification and direction of Engineer in charge. Upto 30m width	cum	3406.470	134.001	One Hundred and Thirty-Four point Zero Zero One	456470.386	Four Lakh Fifty-Six Thousand Four Hundred and Seventy point Three Eight Six
			Earth work by manual labour with clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) for closing breach or channel, with all leads and lifts within the channel width				Two Hundred and		Seven Lakh Forty-Four Thousand Three

52	52	52	within the channel width including profiling, clod breaking, ramming etc. complete as per specification and direction of Engineer in charge. Upto 90m width	cum	3446.000	216.001	Sixteen point Zero Zero One	744339.446	Three Hundred and Thirty-Nine point Four Four Six
53	53	53	Fine dressing and close turfing of the slopes and the crest of embankment with 75mm thick, good quality durba or charkanta sods of size 200mm x 200mm, with all leads and lifts, including ramming, watering until the turf grows properly, maintaining etc. complete (measurement will be given on well grown grass only). as per direction of Engineer in charge.	sqm	39428.000	30.001	Thirty point Zero Zero One	1182879.428	Eleven Lakh Eighty-Two Thousand Eight Hundred and Seventy-Nine point Four Two Eight
54	54	54	Preparation and mobilization of the Site for Construction of Submersible Embankment or other Structural Components in c/w "Haor Flood Management and Livelihood Improved Improvement Project(BWDB Part) as per Technical Specifications, including land lease, rental charges, obtaining permissions for work, developing work area, preparation of platform for temporary semi pucca site office(40sqm), CI Sheet labour sheds(200sqm), CI Sheet Stores(200sqm), supply of wooden & cane seated furniture etc. as specified and as per Contractor's Method Statement and as per direction of Engineer in charge.	LS	1.000	1200000.001	Twelve Lakh point Zero Zero One	1200000.001	Twelve Lakh point Zero Zero One
55	55	55	Demobilization and clean-up of the site upon completion of the works, as per Specifications and Contractor's Method Statement and as per direction of Engineer in Charge.	LS	1.000	250000.001	Two Lakh Fifty Thousand point Zero Zero One	250000.001	Two Lakh Fifty Thousand point Zero Zero One
56	56	56	Providing and maintaining adequate portable water supply by installing 6 Nos. of tube well and sanitation facilities by installing 6 Nos. of sanitary latrines for usage of labours,officials and others for prevailing the hygenic and healthy environment at allover the working site As per direction of the Engineer in charge.	LS	1.000	300000.001	Three Lakh point Zero Zero One	300000.001	Three Lakh point Zero Zero One
57	57	57	Mobilize, strengthen required land based construction equipment such as excavator, dump truck, chain dozer, vibro-compactor, and plants such as generator for site electrification, digital camera for taking photographs and digital video camera for recording/Taking photograph all sequences of works etc for keeping records of the Works	LS	1.000	400000.001	Four Lakh point Zero Zero One	400000.001	Four Lakh point Zero Zero One

			by providing following information including transfer to site, complete for the purposes stated in the Technical Specification and Contractor's Method Statement and as per direction of Engineer in charge.						
58	58	58	Operate, maintain of plant and equipment such as generator for site electrification, for the purpose stated in the Technical Specification and in the Contractor's Method Statement and as per direction of Engineer in charge.	LS	1.000	450000.001	Four Lakh Fifty Thousand point Zero Zero One	450000.001	Four Lakh Fifty Thousand point Zero Zero One
							Grand Total:	154186591.714	Fifteen Crore Forty-One Lakh Eighty-Six Thousand Five Hundred and Ninety-One point Seven One Four

This Bill of Quantities is Electronically Signed by Mr. Mahmudul on behalf of HB-TI JV

M/S. M.A. ENGINEERING & MAM CONSTRUCTION LTD. (JV) (JVCA)									
Bill of Quantities									
Bill of Quantities									
Item no.	Group	Item Code (if any)	Description of Item	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In Words (BDT)	Total Price In Figures (BDT)	Total Price In Words (BDT)
1	1	1	Construction of B.M. Pillars at site with first class bricks in cement mortar (1:4) of size 38cm x 38cm x 75cm on cement concrete (1:2:4) base of size 50cm x 50cm x 7.5cm with 12mm thick cement plastering (1:2) on exposed surfaces of pillar and cement mortar on top (1:2), with inscription of "BWDB" with 25cm of the pillar below ground level etc. complete including ramming the backfill and the cost of all materials as per direction of Engineer in charge.	each	16.000	3000.001	Three Thousand point Zero Zero One	48000.016	Forty-Eight Thousand point Zero One Six
2	2	2	Site preparation by manually removing all miscellaneous objectional materials from entire site and removing soil upto 15cm depth including uprooting stumps, jungle clearing, levelling dressing etc. complete as per direction of Engineer in charge.	sqm	79500.000	12.001	Twelve point Zero Zero One	954079.500	Nine Lakh Fifty-Four Thousand AND Seventy-Nine point Five
			Earth work in excavation of foundation trenches in all kinds						

3	3	3	of soils as per layout plan of foundation excavation with all leads and lifts and placing the spoil earth for constructing the ring bundh/ cofferdam where necessary as per design and specification or disposing it to a safe distance including pushing, levelling, dressing, etc. complete as per direction of Engineer in charge. For moving spoil earth upto a distance of 100m from the centre of the pit.	cum	31621.098	180.001	One Hundred and Eighty point Zero Zero One	5691829.261	Fifty-Six Lakh Ninety-One Thousand Eight Hundred and Twenty-Nine point Two Six One
4	4	4	Installation of pizeometer including supply of 40mm G.I. pipe, brass strainer, socket, labour, by wash boring, lowering, fixing the elevation and providing cover on the top of the well etc. complete as per direction of Engineer in charge.	each	8.000	30000.001	Thirty Thousand point Zero Zero One	240000.008	Two Lakh Forty Thousand point Zero Zero Eight
5	5	5	Shoring for slope protection of foundation trench, canal, embankment, road, pond etc. as per design slopes, grades including removal of spoils to a safe distance as per direction of Engineer in charge. By bamboo post of 6.0m length, 60mm to 80mm dia, 20cm c/c driven 2.0m below ground, with drum sheet walling and average 70mm dia half split bamboo batten @ 2.0m c/c fixed with nails.	sqm	1130.400	400.001	Four Hundred point Zero Zero One	452161.130	Four Lakh Fifty-Two Thousand One Hundred and Sixty-One point One Three
6	6	6	Bailing out of water with all leads and lifts by manual labour or pump, with all arrangements for protection of ring bund and side slopes of foundation pit against erosion or washout etc. complete (actual volume of work will be measured by sounding method before starting the work) as per direction of Engineer in charge. by pump.	cum	277283.791	5.001	Five point Zero Zero One	1386696.239	Thirteen Lakh Eighty-Six Thousand Six Hundred and Ninety-Six point Two Three Nine
7	7	7	Supplying at site U-shape hot rolled steel sheet pile of different section of Phosphorus=0.04%(Maximum), Sulphur = 0.04% (Maximum), Tensile strength=> 490 N/mm2 , Yield strength =>296 N/mm2, Elongation =15% (Minimum) including all taxes, freights, incidental charges etc. complete as per direction of the Engineer -in- charge. U-shape, hot- rolled steel sheet pile width= 400mm to 600mm: height=>100mm, Thickness>=10.5mm. (±0.50mm)	Mton	111.720	145000.001	One Lakh Forty-Five Thousand point Zero Zero One	16199400.112	One Crore Sixty-One Lakh Ninety-Nine Thousand Four Hundred point One One Two
8	8	8	Cutting of steel sheet piles to design and length and shape as per requirement in design and	m	175.320	600.001	Six Hundred point	285192.175	Two Lakh Eighty-Five Thousand One Hundred

0	0	0	drawing and as per direction of Engineer in charge. Upto 10mm thick.	mm	473.320	000.001	point Zero Zero One	263132.473	and Ninety-Two point Four Seven Five
9	9	9	Joining steel sheet piles of different thickness by welding to increase the length of pile as per requirement including necessary modification of the ends to receive the weld, supply of welding materials, equipments and other accessories as per specification and direction of Engineer in charge.	m	148.580	500.001	Five Hundred point Zero Zero One	74290.149	Seventy-Four Thousand Two Hundred and Ninety point One Four Nine
10	10	10	Construction of sump well with dug holes of size 1.80m x 2.0m, laying in position the perforated empty diesel/petrol drum sheet of 1.00m dia to a depth 1.5m having slot area of 1000 sq.cm/sqm, slot dia being 30mm each with supply of necessary shrouding materials comprising of 60% 40mm down graded khoa and 40% coarse sand of FM>=2.50 and placing those around and beneath the drum sheet having thickness of 40cm and 50cm respectively including necessary welding, fitting etc. complete as per direction of Engineer in charge.	each	20.000	15000.001	Fifteen Thousand point Zero Zero One	300000.020	Three Lakh point Zero Two
11	11	11	Driving steel sheet piles of various sections and weights of any type of soil, by monkey hammer including handling and placing in position, staging and supplying of all equipments like monkey hammer, pully, rope, bamboo, bullah etc. including correcting leaning beyond tolerance & other defects and any other incidental cost etc. complete (measurement will be taken on projected width x height) as per direction of Engineer in charge. U-type or any other type: Upto 4.50m depth.	sqm	848.460	1000.001	One Thousand point Zero Zero One	848460.848	Eight Lakh Forty-Eight Thousand Four Hundred and Sixty point Eight Four Eight
12	12	12	Provide 1 (one) coat of Zinc phosphate as primary coat and 2 (two) coat of coaltar epoxy coat over primary coat to steel surface with paint of approved colour etc. complete including the cost of all materials as per direction of Engineer in charge.	sqm	3170.160	400.001	Four Hundred point Zero Zero One	1268067.170	Twelve Lakh Sixty-Eight Thousand AND Sixty-Seven point One Seven
13	13	13	Supplying and placing 20mm thick hessian cloth impregnated with bitumen in expansion joints or on top of sheet piles as per specification and direction of Engineer in charge.	sqm	309.855	150.001	One Hundred and Fifty point Zero Zero One	46478.560	Forty-Six Thousand Four Hundred and Seventy-Eight point Five Six
			Supplying and laying single						Fifty-Six Thousand

14	14	14	layer polythene sheet in floor below cement concrete, RCC slab, on walls etc. complete in all respect as per direction of Engineer in charge. Weighing minimum 1.0 kg per 6.50 sqm	sqm	1892.874	30.001	Thirty point Zero Zero One	56788.113	Thousand Seven Hundred and Eighty-Eight point One One Three
15	15	15	Cement concrete work in leanest mix. 1:3:6 with sand of FM \geq 1.5, in foundation or floor, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in position, consolidation to levels, curing, including supply of all materials, excluding the cost of formworks etc. complete as per direction of Engineer in charge. With 25mm down graded Stone Chips	cum	272.314	11000.001	Eleven Thousand point Zero Zero One	2995454.272	Twenty-Nine Lakh Ninety-Five Thousand Four Hundred and Fifty-Four point Two Seven Two
16	16	16	Cement concrete work in leanest mix. 1:4:8, with sand of FM \geq 1.5, in foundation or floor, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in position, consolidation to levels, curing, including supply of all materials, excluding the cost of formworks etc. complete as per direction of Engineer in charge. With 25mm down graded Stone chips.	cum	25.062	10500.001	Ten Thousand Five Hundred point Zero Zero One	263151.025	Two Lakh Sixty-Three Thousand One Hundred and Fifty-One point Zero Two Five
17	17	17	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Footing, footing beams, girder beams, foundation slab with 60-80mm dia barrack bamboo props.	sqm	1202.928	800.001	Eight Hundred point Zero Zero One	962343.603	Nine Lakh Sixty-Two Thousand Three Hundred and Forty-Three point Six Zero Three
18	18	18	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size	sqm	3619.370	800.001	Eight Hundred point Zero Zero One	2895499.619	Twenty-Eight Lakh Ninety-Five Thousand Four Hundred and

			including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Vertical and inclined walls, columns, piers with 60-80mm dia barrack bamboo props.						Ninety-Nine point Six One Nine
19	19	19	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Deck slab, operating deck slab, top slab of barrel upto 3.5m height with 60-80mm dia barrack bamboo props.	sqm	40.340	800.001	Eight Hundred point Zero Zero One	32272.040	Thirty-Two Thousand Two Hundred and Seventy-Two point Zero Four
20	20	20	Form-work for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mm x 40mm x 6mm M.S. Angle frame and 25mm x 6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. Deck slab, operating deck slab, top slab of barrel above 3.5m upto 6.5m height with 50mm dia GI pipe props.	sqm	41.400	800.001	Eight Hundred point Zero Zero One	33120.041	Thirty-Three Thousand One Hundred and Twenty point Zero Four One
21	21	21	Supplying and filling sand in foundation of hydraulic structures, buildings and in protective works with selected sand, in 150mm thick layer, including levelling, dressing, ramming, watering etc. complete (compacted to 50% relative density by manual labour using mallet/vibro compactor) as per direction of Engineer in charge. sand of FM>= 1.50	cum	4294.905	1150.001	One Thousand One Hundred and Fifty point Zero Zero One	4939145.045	Forty-Nine Lakh Thirty-Nine Thousand One Hundred and Forty-Five point Zero Four Five
			Reinforced cement concrete work in leanest mix. 1:1.5:3, with 20mm down graded coarse aggregates and sand of FM>2.0 to FM<=2.5, to attain a minimum 28 day cylinder strength of 22.0 N/mm ² , including breaking, screening				Sixteen		Two Crore Fifty-Three Lakh Ninety-Five

22	22	22	including breaking, screening, grading, washing aggregates with clean water, mixing, laying in forms, consolidation to levels, curing, including supply of all materials, excluding cost of M.S. work for reinforcements and formworks etc. complete and as per direction of Engineer in charge. With stone chips	cum	1587.221	16000.001	Thousand point Zero Zero One	25395537.587	Five Thousand Five Hundred and Thirty-Seven point Five Eight Seven
23	23	23	M.S. Work for reinforcement with deformed M.S. bar, fy = 400 N/mm ² , (made from billet) in RCC works, including local handling, cutting, forging, bending, cleaning and fabrication with supply of deformed M.S. bar in different sizes and binding with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge. 8mm dia to 30mm dia.	kg	164626.829	85.001	Eighty-Five point Zero Zero One	13993445.092	One Crore Thirty-Nine Lakh Ninety-Three Thousand Four Hundred and Forty-Five point Zero Nine Two
24	24	24	Supply and fitting and fixing 23cm wide P.V.C water stops having minimum strength of 13.80 N/mm ² at 225% elongation and of approved quality in contraction and expansion joints with necessary arrangements for modification in shuttering and keeping the water stop in position etc. complete as per design, specification and direction of Engineer in charge. 3 bulb type	m	46.000	1500.001	One Thousand Five Hundred point Zero Zero One	69000.046	Sixty-Nine Thousand point Zero Four Six
25	25	25	Supplying and laying dry 1st class or pick jhama chips as filter in two layers (top and bottom) as per specific size, range and gradation, including breaking chips, grading, preparation of surface, compacting each layer etc. complete with supply of all materials and as per direction of Engineer in charge. Well graded between 40mm to 20mm size.	cum	508.873	4800.001	Four Thousand Eight Hundred point Zero Zero One	2442590.909	Twenty-Four Lakh Forty-Two Thousand Five Hundred and Ninety point Nine Zero Nine
26	26	26	Supplying and laying dry 1st class or pick jhama chips as filter in two layers (top and bottom) as per specific size, range and gradation, including breaking chips, grading, preparation of surface, compacting each layer etc. complete with supply of all materials and as per direction of Engineer in charge. Well graded between 20mm to 5mm size.	cum	508.873	4800.001	Four Thousand Eight Hundred point Zero Zero One	2442590.909	Twenty-Four Lakh Forty-Two Thousand Five Hundred and Ninety point Nine Zero Nine
27	27	27	Supplying and laying sand as filter layers as per specific size ranges and gradation including preparation of surface, compacting in layer etc. complete with supply of all materials and as per direction	cum	490.355	1200.001	One Thousand Two Hundred point Zero	588426.490	Five Lakh Eighty-Eight Thousand Four Hundred and Twenty-

[illegible]

33	33	33	Labour charge for protective works in laying C.C. blocks of different sizes including preparation of base, watering and ramming of base etc. complete as per direction of the Engineer in charge. Beyond 200m	cum	366.625	1500.001	One Thousand Five Hundred point Zero One	549937.867	Forty-Nine Thousand Nine Hundred and Thirty-Seven point Eight Six Seven
34	34	34	Supplying and placing non-woven needle punched type geotextile fabric (100% Polypropylene Fabric, unit weight : 855 Kg/m3 to 946 Kg/m3) as filter materials of elongation at maximum force machine direction (MD) >=60% and <= 100 % , elongation at maximum force (CMD) => 40% and <= 100% ,horizontal and vertical permeability (under 2 kn/m² pressure)=>2x10E-3 m/sec. for effective erosion protection in hydraulic structures/river training works including local handling, placing in position, providing machine seamed joints (with 100% polypropylene or nylon thread) or 35cm lap in dry condition or minimum 100cm lap under water including protecting the geotextile material from UV ray and from any other damages including supply of all materials, labours, equipment's etc. complete as per direction of Engineer in charge. (Geotextile delivered at site should be certified by ISO and clearly labelled with brand name and grade printed at regular intervals across the body of the fabric). Mass =>300 gm/m², thickness(Under 2 kpa pressure) =>2.00mm, EoS<=0.11mm, strip tensile strength =>15kn/m, grab strength =>850N, CBR puncture resistance =>2200N.	sqm	8784.695	150.001	One Hundred and Fifty point Zero One	1317713.035	Thirteen Lakh Seventeen Thousand Seven Hundred and Thirteen point Zero Three Five
35	35	35	M.S. Work for reinforcement with plain M.S. bar, fy=300 N/mm², (made from billet) in RCC works, including local handling, cutting, forging, bending, cleaning and fabrication with supply of plain round M.S. bar in different sizes and binding with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge. 6mm dia.	kg	68.400	130.001	One Hundred and Thirty point Zero One	8892.068	Eight Thousand Eight Hundred and Ninety-Two point Zero Six Eight
36	36	36	Manufacturing, supplying and Installation of Hand Wheel type lifting device for slide gate with 63mm dia steel shaft, 108mm outer dia bronze nut taper roller bearing SKF-50216 etc. as per approved design including supply of all components,	each	3.000	30000.001	Thirty Thousand point Zero	90000.003	Ninety Thousand point Zero Zero

			labours with a prime coat of redoxide where necessary etc. complete including the cost of all materials as per specification and direction of Engineer in charge.				Zero One		Zero Three
37	37	37	Earth work by manual labour in resectioning of embankment/ canal bank/river slopes/ road/ compound etc. manually compacted by 7.0 kg iron rammer to avoid any air pocket in clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) within the initial lead of 30m and all lifts including throwing the spoils to profile in layers not exceeding 150mm thickness with clod breaking to a maximum size of 100mm, removing roots & stumps of trees of girth upto 200mm from the ground, benching the side slopes, stripping/ ploughing the base of embankment and borrowpit areas, dug bailing, bail out of water, rough dressing including 150mm cambering at the centre of the crest (where necessary) etc. complete as per direction of Engineer in charge. 0 m to 3.00 m height	cum	15774.600	135.001	One Hundred and Thirty-Five point Zero One	2129586.775	Twenty-One Lakh Twenty-Nine Thousand Five Hundred and Eighty-Six point Seven Seven Five
38	38	38	Earth work by manual labour in resectioning of embankment/ canal bank/river slopes/ road/ compound etc. manually compacted by 7.0 kg iron rammer to avoid any air pocket in clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) within the initial lead of 30m and all lifts including throwing the spoils to profile in layers not exceeding 150mm thickness with clod breaking to a maximum size of 100mm, removing roots & stumps of trees of girth upto 200mm from the ground, benching the side slopes, stripping/ ploughing the base of embankment and borrowpit areas, dug bailing, bail out of water, rough dressing including 150mm cambering at the centre of the crest (where necessary) etc. complete as per direction of Engineer in charge. 0m to 4.00m height	cum	42765.350	140.001	One Hundred and Forty point Zero One	5987191.765	Fifty-Nine Lakh Eighty-Seven Thousand One Hundred and Ninety-One point Seven Six Five
39	39	39	Extra rate for every additional lead of 15m or part thereof beyond the initial lead of 30m upto a maximum of 19 leads (3m neglected) for all kinds of earth work. 3 nos lead	pldcum	42765.350	105.001	One Hundred and Five point Zero One	4490404.515	Forty-Four Lakh Ninety Thousand Four Hundred and Four point Five One Five
			Earth work by Mechanical Excavator (Long Boom) in all kinds of soil in excavation / re-				One		Forty-Three Lakh Sixty Thousand

40	40	40	excavation of channel/canal/khal etc. Including disposal of spoil-soil upto 30m away from the point of excavation with rough dressing and levelling etc. complete as per direction of Engineer-in-Charge.	cum	29072.040	150.001	One Hundred and Fifty point Zero One	4360835.072	Thousand Eight Hundred and Thirty-Five point Zero Seven Two
41	41	41	Earth work by manual labour in constructing/ resectioning of embankment/ canal bank/ road etc. with clayey soil(minimum 30% clay, 0-40% silt and 0-30% sand) within the initial lead of 30m, and all lifts including throwing the spoils to profiles in layers not exceeding 150mm in thickness, clod breaking upto a maximum size of 100mm, benching the side slopes, stripping/ ploughing the base of embankment and borrow pit area, dug bailing, cutting trees upto 200mm girth, with uprooting stumps, clearing jungles, bailing out water, rough dressing and 150mm cambering at the centre of the crest etc. complete as per specification and direction of Engineer in charge. 0 to 4 m height.	cum	7540.140	130.001	One Hundred and Thirty point Zero One	980225.740	Nine Lakh Eighty Thousand Two Hundred and Twenty-Five point Seven Four
42	42	42	Earth work by manual labour with clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) in construction of cross bundh/ring bundh as per design and specification with all leads and lifts, throwing the earth in layers not exceeding 150mm in thickness, including breaking clods, rough dressing, clearing the jungle, removing stumps, dug bailing and 75mm cambering etc. complete as per direction of Engineer in charge.	cum	34654.292	130.001	One Hundred and Thirty point Zero One	4505092.614	Forty-Five Lakh Five Thousand AND Ninety-Two point Six One Four
43	43	43	Back filling in hydraulic structures and slope building in protective works including all leads and lifts with selected local soil in layer of 150mm including watering, ramming etc. complete compacted to 20% relative density by compactor or any other suitable method as per direction of Engineer in charge.	cum	13208.537	135.001	One Hundred and Thirty-Five point Zero One	1783165.704	Seventeen Lakh Eighty-Three Thousand One Hundred and Sixty-Five point Seven Zero Four
44	44	44	Earth work by manual labour in all kinds of soil in removing the cross bundh/ring bundh, including all leads and lifts complete and placing the spoils to a safe distance, (minimum 15m apart from the bank) as per direction of Engineer in charge.	cum	5432.057	125.001	One Hundred and Twenty-Five point Zero One	679012.557	Six Lakh Seventy-Nine Thousand AND Twelve point Five Five Seven
			M.S. Work in plates, angles, channels, flat bars, Tees etc. including fabricating, machining, cutting, bending, welding, forging				One		Six Lakh Forty-Two

45	45	45	<p>bending, welding, forging, drilling, revetting, embedding anchor bars, staging and fitting, fixing, local handling etc. complete with energy consumption and supply of labours including the cost of materials as per design, specification and direction of Engineer in charge.</p>	kg	4945.500	130.001	Hundred and Thirty point Zero Zero One	642919.946	Thousand Nine Hundred and Nineteen point Nine Four Six
46	46	46	<p>Manufacturing & Supplying of M.S. Vertical Lift Gate shutter of 8mm thick M.S. skin plate and stiffener with minimum 75mmx75mmx10mm M.S. angle as frame, horizontal & vertical beam, 75mmx25mmx12mm P-type rubber seal, fixed with 10mm dia x 63.5mm M.S. counter shank bolts with nuts and 40mmx10mm M.S. strip as clamp drilled spaces @ 150mm c/c, stem attachment with proper thread, nut, cotter pin and washer as per approved design including the cost of all materials of proper grade & brand new with a prime coat of redoxide where necessary as per specification and direction of Engineer in charge. Size 1.95m x 1.65m.</p>	each	3.000	100000.001	One Lakh point Zero Zero One	300000.003	Three Lakh point Zero Zero Three
47	47	47	<p>Labour charge for fitting and fixing of M.S. vertical lift gate/ flap gate shutters of different size including making holes in concrete for hooking arrangements with supply of necessary materials, tools and other accessories required for fitting the same to regulator/slucice and mending the damages with CC (1:2:4), removing the spoils etc. complete including the cost of all materials as per direction of Engineer in charge. Size 1.95m x 1.35m or 1.95m x 1.65m.</p>	each	3.000	20000.001	Twenty Thousand point Zero Zero One	60000.003	Sixty Thousand point Zero Zero Three
48	48	48	<p>Supplying pressure treated wooden fall boards/stop logs of different sizes (not less than 15cm in depth) of sal, sundari, garjan, shishu or equivalent for regulator/ sluices, including fixing in position with eye hook etc. complete as per direction of Engineer in charge.</p>	cum	2.484	135000.001	One Lakh Thirty-Five Thousand point Zero Zero One	335340.002	Three Lakh Thirty-Five Thousand Three Hundred and Forty point Zero Zero Two
49	49	49	<p>Supplying, laying fitting and fixing of different dia G.I. pipes with all special fittings, such as bends, elbows, sockets, tees, unions, jamnuts etc. including cutting foundation trenches upto required depth where necessary and filling the same with earth duly compacted, making holes in floors and walls and mending the damages, fixing in walls with holders and clips, including cutting threads,</p>	m	80.000	4000.001	Four Thousand point Zero Zero One	320000.080	Three Lakh Twenty Thousand point Zero Eight

			making necessary connection etc. all complete, and as per direction of Engineer in charge. 40mm dia G.I. pipe line.						
50	50	50	Name Plate & Flag Stand and Accessories etc.	LS	2.000	10000.001	Ten Thousand point Zero Zero One	20000.002	Twenty Thousand point Zero Zero Two
51	51	51	Earth work by manual labour with clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) for closing breach or channel, with all leads and lifts within the channel width including profiling, clod breaking, ramming etc. complete as per specification and direction of Engineer in charge. Upto 30m width	cum	3406.470	140.001	One Hundred and Forty point Zero Zero One	476909.206	Four Lakh Seventy-Six Thousand Nine Hundred and Nine point Two Zero Six
52	52	52	Earth work by manual labour with clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) for closing breach or channel, with all leads and lifts within the channel width including profiling, clod breaking, ramming etc. complete as per specification and direction of Engineer in charge. Upto 90m width	cum	3446.000	160.001	One Hundred and Sixty point Zero Zero One	551363.446	Five Lakh Fifty-One Thousand Three Hundred and Sixty-Three point Four Four Six
53	53	53	Fine dressing and close turfing of the slopes and the crest of embankment with 75mm thick, good quality durba or charkanta sods of size 200mm x 200mm, with all leads and lifts, including ramming, watering until the turf grows properly, maintaining etc. complete (measurement will be given on well grown grass only). as per direction of Engineer in charge.	sqm	39428.000	8.001	Eight point Zero Zero One	315463.428	Three Lakh Fifteen Thousand Four Hundred and Sixty-Three point Four Two Eight
54	54	54	Preparation and mobilization of the Site for Construction of Submersible Embankment or other Structural Components in c/w "Haor Flood Management and Livelihood Improved Improvement Project(BWDB Part) as per Technical Specifications, including land lease, rental charges, obtaining permissions for work, developing work area, preparation of platform for temporary semi pucca site office(40sqm), CI Sheet labour sheds(200sqm), CI Sheet Stores(200sqm), supply of wooden & cane seated furniture etc. as specified and as per Contractor's Method Statement and as per direction of Engineer in charge.	LS	1.000	700000.001	Seven Lakh point Zero Zero One	700000.001	Seven Lakh point Zero Zero One
55	55	55	Demobilization and clean-up of the site upon completion of the works, as per Specifications and Contractor's Method	LS	1.000	80000.001	Eighty Thousand point	80000.001	Eighty Thousand point Zero

			and Contractor's Method Statement and as per direction of Engineer in Charge.				Zero Zero One		point Zero Zero One
56	56	56	Providing and maintaining adequate portable water supply by installing 6 Nos. of tube well and sanitation facilities by installing 6 Nos. of sanitary latrines for usage of labours, officials and others for prevailing the hygienic and healthy environment at allover the working site As per direction of the Engineer in charge.	LS	1.000	120000.001	One Lakh Twenty Thousand point Zero Zero One	120000.001	One Lakh Twenty Thousand point Zero Zero One
57	57	57	Mobilize, strengthen required land based construction equipment such as excavator, dump truck, chain dozer, vibro-compact, and plants such as generator for site electrification, digital camera for taking photographs and digital video camera for recording/Taking photograph all sequences of works etc for keeping records of the Works by providing following information including transfer to site, complete for the purposes stated in the Technical Specification and Contractor's Method Statement and as per direction of Engineer in charge.	LS	1.000	300000.001	Three Lakh point Zero Zero One	300000.001	Three Lakh point Zero Zero One
58	58	58	Operate, maintain of plant and equipment such as generator for site electrification, for the purpose stated in the Technical Specification and in the Contractor's Method Statement and as per direction of Engineer in charge.	LS	1.000	150000.001	One Lakh Fifty Thousand point Zero Zero One	150000.001	One Lakh Fifty Thousand point Zero Zero One
							Grand Total:	149894350.100	Fourteen Crore Ninety- Eight Lakh Ninety- Four Thousand Three Hundred and Fifty point One

This Bill of Quantities is Electronically Signed by Mr. Md. Abdul on behalf of M/S. M.A. ENGINEERING & MAM CONSTRUCTION LTD. (JV)