Individual Report

Tender/Proposal Detail			
Tender/Proposal ID :	143780	**Invitation Reference No. :**	BWDB/Kishore/T-1/6591 Date: 30/11/2017
Closing Date and Time :	04-Jan-2018 14:40	**Opening Date and Time :**	04-Jan-2018 14:40
Procuring Entity :	Kishoreganj WD Division		
Brief :	WDB/Kish/HFMLIP/PW-20 Construction of 1 Causeway-4 nos a Chhitra Khal 4.00m at km 21.77 of Nunnir Haor b Nabinpur Khal 4.00m at km 23.38 of Noapara Haor c Dipjuri Khal 4.0m at km 27.00 of Boro Haor d Sudhi Khal 4.00m at km 33.30 of Boro Haor 2Box sluice/Dranage Culvert- 4 nos a Chhagalia khal at km 10.48 of Noapara haor b Near Nasir at km 7.74 of Nunnir haor c Singhpur khal at km 11.17 of Noapara haor d Goru Chara Khal at km. 10.00 of Boro Haor 3 Irrigation Inlet structure-36 nos in different placess in Noapara haor Nunnir haor & Boro haor in c/w Haor Flood Management and Livelihood Improved Improvement ProjectBWDB Part under Kishoregange WD Division BWDB Kishoregonj during the FY 2017-18 & 2018-19. Package No. WDB/Kish/HFMLI/PW-20.		

Package No	Package Description
WDB/Kish/HFMLIP/PW-20	Construction of 1 Causeway-4 nos a Chhitra Khal 4.00m at km 21.77 of Nunnir Haor b Nabinpur Khal 4.00m at km 23.38 of Noapara Haor c Dipjuri Khal 4.0m at km 27.00 of Boro Haor d Sudhi Khal 4.00m at km 33.30 of Boro Haor 2Box sluice/Dranage Culvert- 4 nos a Chhagalia khal at km 10.48 of Noapara haor b Near Nasir at km 7.74 of Nunnir haor c Singhpur khal at km 11.17 of Noapara haor d Goru Chara Khal at km. 10.00 of Boro Haor 3 Irrigation Inlet structure-36 nos in different placess in Noapara haor Nunnir haor & Boro haor in c/w Haor Flood Management and Livelihood Improved Improvement ProjectBWDB Part under Kishoregange WD Division BWDB Kishoregonj during the FY 2017-18 & 2018-19. Package No. WDB/Kish/HFMLI/PW-20.

AKA-UCL (JV)
(JVCA)

Bill Of Quantity -02-(Chitra khal causeway)

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)
8	04-120	04-120	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 morter on top (1:2), with inscription of "BWDB" with 25cm of the pillar balow ground level etc. complete including ramming the backfill and the cost of all materials as per direction of Engineer in charge.	each	5.000	1203.771	One Thousand Two Hundred and Three point Seven Seven One	6018.855	Six Thousand AND Eighteen point Eight Five Five
9	04-180	04-180	Site preparation by manually removing all miscellaneous objectional materials form entire site and removing soil upto 15cm depth including uprooting stumps, jungle clearing, levelling dressing etc.	sqm	9000.000	27.701	Twenty-Seven point Seven Zero One	249309.000	Two Lakh Forty-Nine Thousand Three Hundred and Nine

			complete as per direction of Engineer in charge.						and Nine
10	12-100	12-100	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	6.000	2584.221	Two Thousand Five Hundred and Eighty-Four point Two Two One	15505.326	Fifteen Thousand Five Hundred and Five point Three Two Six
11	16-310	16-310-10	Earth work in excavation of foundation trenches in all kinds of soil as per layout plan of foundation excavation with all leads and lifts and placing the spoil earth for constructing the ring bundh/offerdam 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. 16-310-10 : For moving spoil earth upto a distance of 100m from the centre of the pit	cum	3029.399	246.711	Two Hundred and Forty-Six point Seven One One	747386.057	Seven Lakh Forty-Seven Thousand Three Hundred and Eighty-Six point Zero Five Seven
12	16-560	16-560-20	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. 16-560-20: By bamboo post of 6.0m length, c/c fixed with nails.	sqm	289.200	837.151	Eight Hundred and Thirty-Seven point One Five One	242104.069	Two Lakh Forty-Two Thousand One Hundred and Four point Zero Six Nine
13	12-310	12-310-20	Bailing out of water with all leads and lifts by manual labour or pump, with all arrengements 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. 12-310-20 : By pump.	cum	50971.286	6.131	Six point One Three One	312504.954	Three Lakh Twelve Thousand Five Hundred and Four point Nine Five Four
14	44-240	44-240-30	Supplying at site U-shape hot rolled steel sheet pile of different section of Phosphorus=0.04%(Maximum), Sulphur = 0.04% (Maximum), Copper= 0.25% (Minimum), 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. 44-240-30 : U-shape, hot-rolled steel sheet pile width= 400mm to 600mm: height=> 100mm, Th.= > 10.5: wt. per sqm of pile wall =>120 kg/m2: sectional modulus per one meter of pile wall width => 874 cm3/m	Mton	12.888	150000.001	One Lakh Fifty Thousand point Zero Zero One	1933200.013	Nineteen Lakh Thirty-Three Thousand Two Hundred point Zero One Three

15	44-320	44-320-10	Cutting of steel sheet piles to design length and shape as per requirement in design and drawing and as per direction of Engineer in charge. 44-320-10 : Upto 10mm thick.	m	61.200	39.161	Thirty-Nine point One Six One	2396.653	Two Thousand Three Hundred and Ninety-Six point Six Five Three
16	12-300	12-300	Construction of sump well with dug holes of size 1.80 m x 2.0 m, laying in position the perforated empty diesel/petrol drum sheet of 1.00 m 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	10.000	17211.171	Seventeen Thousand Two Hundred and Eleven point One Seven One	172111.710	One Lakh Seventy-Two Thousand One Hundred and Eleven point Seven One
17	44-270	44-270-20	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. 44-270-20: U-type or any other type : Upto 4.50 m depth.	sqm	94.500	1250.751	One Thousand Two Hundred and Fifty point Seven Five One	118195.969	One Lakh Eighteen Thousand One Hundred and Ninety-Five point Nine Six Nine
18	72-180	72-180	Painting of steel sheet piles, 2 coats of bitumen paint, including preparation of surface with sand paper, iron brush etc. including the cost of all materials and labour etc. complete as per direction of Engineer in charge.	sqm	367.200	293.331	Two Hundred and Ninety-Three point Three Three One	107711.143	One Lakh Seven Thousand Seven Hundred and Eleven point One Four Three
19	44-310	44-310	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	45.900	461.801	Four Hundred and Sixty-One point Eight Zero One	21196.666	Twenty-One Thousand One Hundred and Ninety-Six point Six Six Six
20	44-220	44-220-10	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.	sqm	271.690	34.001	Thirty-Four point Zero Zero One	9237.732	Nine Thousand Two Hundred and Thirty-Seven point

			44-220-10: Weighing minimum 1.0 kg per 6.50 sqm						point Seven Three Two
21	28-120	28-120-20	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. 28-120-20: With 25mm down graded stone chips.	cum	31.126	11500.001	Eleven Thousand Five Hundred point Zero Zero One	357949.031	Three Lakh Fifty-Seven Thousand Nine Hundred and Forty-Nine point Zero Three One
22	28-100	28-100-20	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. 28-100-20 : With 25mm down graded stone chips	cum	1.620	11500.001	Eleven Thousand Five Hundred point Zero Zero One	18630.002	Eighteen Thousand Six Hundred and Thirty point Zero Zero Two
23	28-200	28-200-10	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. 28-200-10 : with stone chips	cum	177.708	12500.001	Twelve Thousand Five Hundred point Zero Zero One	2221350.178	Twenty-Two Lakh Twenty-One Thousand Three Hundred and Fifty point One Seven Eight
24	76-120	76-120-10	M.S. Work for reinforcement with deformed M.S. bar, fy=414 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. 76-120-10: 8mm dia to 30mm dia	kg	15857.836	81.001	Eighty-One point Zero Zero One	1284500.574	Twelve Lakh Eighty-Four Thousand Five Hundred point Five Seven Four
			Formwork for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with						

25(a)	36-150	36-150-60	40mmx40mmx6mm M.S. angle frame and 25mmx6mm 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. 36-150-60: Footing, footing beams, grade beams, foundation slab with 60-80mm dia barrack bamboo props.	sqm	185.330	735.351	Seven Hundred and Thirty-Five point Three Five One	136282.601	One Lakh Thirty-Six Thousand Two Hundred and Eighty-Two point Six Zero One
25(b)	36-150	36-150-10	Vertical and inclined walls, columns, piers with 60-80mm dia barrack bamboo props.	sqm	424.570	909.691	Nine Hundred and Nine point Six Nine One	386227.508	Three Lakh Eighty-Six Thousand Two Hundred and Twenty-Seven point Five Zero Eight
26	16-520	16-520-20	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. 16-520-20 : sand of FM>=1.50	cum	174.701	921.991	Nine Hundred and Twenty-One point Nine Nine One	161072.750	One Lakh Sixty-One Thousand AND Seventy-Two point Seven Five
27(a)	40-610	40-610-20	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: 40-610-20: Well graded between 40mm to 20mm size.	cum	20.772	3730.471	Three Thousand Seven Hundred and Thirty point Four Seven One	77489.344	Seventy-Seven Thousand Four Hundred and Eighty-Nine point Three Four Four
27(b)	40-610	40-610-30	Well graded between 20mm to 5mm size. (Combination of sub-item 10 & 30 or 20 & 30 shall be used)	cum	20.772	4076.091	Four Thousand AND Seventy-Six point Zero Nine One	84668.562	Eighty-Four Thousand Six Hundred and Sixty-Eight point Five Six Two
			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				Four		Twenty-Five Lakh Sixty-Four

28(a)	40-140	40-140-50	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. (a) 40-140-50 : block size 30cmx30cmx30cm.	nos	5288.000	485.001	Four Hundred and Eighty-Five point Zero Zero One	2564685.288	Sixty-Four Thousand Six Hundred and Eighty-Five point Two Eight Eight
28(b)	40-140	40-140-40	40-140-40 :block size 40cmx40cmx20cm	nos	1503.000	485.001	Four Hundred and Eighty-Five point Zero Zero One	728956.503	Seven Lakh Twenty-Eight Thousand Nine Hundred and Fifty-Six point Five Zero Three
29	40-220	40-220-10	Labour charge for protective works in laying CC blocks of different sizes including preparation of base, watering and ramming of base etc. complete as per direction of Engineer in charge. 40-220-10 : Within 200 m.	cum	214.880	1250.001	One Thousand Two Hundred and Fifty point Zero Zero One	268600.215	Two Lakh Sixty-Eight Thousand Six Hundred point Two One Five
30	40-600	40-600-20	Supplying and placing non-woven needle punched type geotextile fabric 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% polypropeline 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, equipments 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 accross the body of the fabric).Supplying and placing non-woven needle punched type geotextile fabric as filter materials of elongation at maximum force machine direction (MD) >=60% and <= 100 % , elongation at maximum force (CMD) => 40% and <=	sqm	280.525	158.661	One Hundred and Fifty-Eight point Six Six One	44508.377	Forty-Four Thousand Five Hundred and Eight point Three

			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% polypropeline 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, equipments 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 accross the body of the fabric). 40-600-20 . Mass =>300 gm/m², thickness(Under 2 kpa pressure) =>2.00 mm, EoS<=0.11mm, strip tensile strength =>15 kn/m, grab strength =>850 N, CBR puncture resistance =>2200 N.							Seven Seven
31	16-140	16-140-10	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. 16-140-10: 0 m to 3 m height	cum	2948.000	187.791	One Hundred and Eighty-Seven point Seven Nine One	553607.868	Five Lakh Fifty-Three Thousand Six Hundred and Seven point Eight Six Eight
32	16-130	16-130	Earth work by manual labour in all kinds of soil in excavation or reexcavation of channels with the initial lead of 30m and lift of 1.5m including levelling, dressing and throwing the spoils to profile with breaking clods, rough dressing, clearing jungles including cutting trees upto 200mm girth, dug bailing etc. complete as per direction	cum	6110.000	142.471	One Hundred and Forty-Two point Four Seven One	870497.810	Eight Lakh Seventy Thousand Four Hundred and Ninety-Seven point Eight One

			of Engineer in charge.						One
33	16-200	16-200	Extra rate for every additional lift of 1.00 meter part thereof beyond the initial lift of 1.5m (30 cm neglected) for all kinds of earth work. 1 no. lift	plt/cum	6110.000	10.991	Ten point Nine Nine One	67155.010	Sixty-Seven Thousand One Hundred and Fifty-Five point Zero One
34	16-220	16-220	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	2602.601	142.421	One Hundred and Forty-Two point Four Two One	370665.037	Three Lakh Seventy Thousand Six Hundred and Sixty-Five point Zero Three Seven
35	16-190	16-190	Extra rate for every additional lead of 15 m or part thereof beyond the initial lead of 30m up to a maximum of 19 leads (3m neglected) for all kinds of earth work 1 no lead	pld/cum	2602.601	14.571	Fourteen point Five Seven One	37922.499	Thirty-Seven Thousand Nine Hundred and Twenty-Two point Four Nine Nine
36	04-280	04-280-10	Constructing at site, cement mortar gauge on masonry wall, including engraving in meter, decimeter & centimeter, painting and figuring with black and red water proof paint, etc. complete as per direction of Engineer in charge. 04-280-10: 150mm x 25mm	m	4.200	44.731	Forty-Four point Seven Three One	187.870	One Hundred and Eighty-Seven point Eight Seven
37	16-240	16-240	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, (minimun 15m apart from the bank) as per direction of Engineer in charge.	cum	1456.394	142.471	One Hundred and Forty-Two point Four Seven One	207493.910	Two Lakh Seven Thousand Four Hundred and Ninety-Three point Nine One
38	16-540	16-540-20	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. 16-540-20 : Sand of FM>=0.80	cum	503.380	757.751	Seven Hundred and Fifty-Seven point Seven Five One	381436.698	Three Lakh Eighty-One Thousand Four Hundred and Thirty-Six point Six Nine Eight
39	16-530	16-530	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	cum	603.437	159.491	One Hundred and Fifty-Nine point	96242.771	Ninety-Six Thousand Two Hundred and Forty-

	330	330	etc. complete compacted to 20% relative density by compactor or any other suitable method as per direction ofEngineer in charge.				Nine point Four Nine One		Two point Seven Seven One
40	48-100	48-100	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 (measurment will be given on well grown grass only), as per direction of Engineer in charge.	sqm	1189.000	26.171	Twenty-Six point One Seven One	31117.319	Thirty-One Thousand One Hundred and Seventeen point Three One Nine
							Grand Total:	14888125.872	One Crore Forty-Eight Lakh Eighty-Eight Thousand One Hundred and Twenty-Five point Eight Seven Two

This Bill Of Quantity -02-(Chitra khal causeway) is Electronically Signed by Mr. Md Ali on behalf of AKA-UCL (JV)

Ashim Singh-M/S Subroto Suttradhar-M/S Pritom Enterprise (JV)
(JVCA)

Bill Of Quantity -02-(Chitra khal causeway)

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9	04-	04-	Site preparation by manually removing all miscellaneous objectional materials form entire site and removing soil upto 15cm depth including	sqm	9000.000	27.721	Twenty-Seven point	249489.000	Two Lakh Forty-Nine Thousand Four

9	180	180	upto 15cm depth including uprooting stumps, jungle clearing, levelling dressing etc. complete as per direction of Engineer in charge.	sqm	9000.000	27.721	point Seven Two One	249489.000	Hundred and Eighty-Nine
10	12-100	12-100	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	6.000	2584.221	Two Thousand Five Hundred and Eighty-Four point Two Two One	15505.326	Fifteen Thousand Five Hundred and Five point Three Two Six
11	16-310	16-310-10	Earth work in excavation of foundation trenches in all kinds of soil as per layout plan of foundation excavation with all leads and lifts and placing the spoil earth for constructing the ring bundh/offerdam 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. 16-310-10 : For moving spoil earth upto a distance of 100m from the centre of the pit	cum	3029.399	246.711	Two Hundred and Forty-Six point Seven One One	747386.057	Seven Lakh Forty-Seven Thousand Three Hundred and Eighty-Six point Zero Five Seven
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			meter of pile wall width => 874 cm3/m						
15	44-320	44-320-10	Cutting of steel sheet piles to design length and shape as per requirement in design and drawing and as per direction of Engineer in charge. 44-320-10 : Upto 10mm thick.	m	61.200	39.161	Thirty-Nine point One Six One	2396.653	Two Thousand Three Hundred and Ninety-Six point Six Five Three
16	12-300	12-300	Construction of sump well with dug holes of size 1.80 m x 2.0 m, laying in position the perforated empty diesel/petrol drum sheet of 1.00 m 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	10.000	17211.171	Seventeen Thousand Two Hundred and Eleven point One Seven One	172111.710	One Lakh Seventy-Two Thousand One Hundred and Eleven point Seven One
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18	72-180	72-180	Painting of steel sheet piles, 2 coats of bitumen paint, including preparation of surface with sand paper, iron brush etc. including the cost of all materials and labour etc. complete as per direction of Engineer in charge.	sqm	367.200	293.331	Two Hundred and Ninety-Three point Three Three One	107711.143	One Lakh Seven Thousand Seven Hundred and Eleven point One Four Three
19	44-310	44-310	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	45.900	461.811	Four Hundred and Sixty-One point Eight One One	21197.125	Twenty-One Thousand One Hundred and Ninety-Seven point One Two Five
		44	Supplying and laying single layer polythene sheet in floor below cement concrete, RCC				Thirty-		Eight Thousand Four Hundred

20	44-220	44-220-10	slab, on walls etc. complete in all respect as per direction of Engineer in charge. 44-220-10: Weighing minimum 1.0 kg per 6.50 sqm	sqm	271.690	31.221	One point Two Two One	8482.433	and Eighty-Two point Four Three Three
21	28-120	28-120-20	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. 28-120-20: With 25mm down graded stone chips.	cum	31.126	10954.481	Ten Thousand Nine Hundred and Fifty-Four point Four Eight One	340969.176	Three Lakh Forty Thousand Nine Hundred and Sixty-Nine point One Seven Six
22	28-100	28-100-20	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. 28-100-20 : With 25mm down graded stone chips	cum	1.620	10601.191	Ten Thousand Six Hundred and One point One Nine One	17173.929	Seventeen Thousand One Hundred and Seventy-Three point Nine Two Nine
23	28-200	28-200-10	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. 28-200-10 : with stone chips	cum	177.708	11674.491	Eleven Thousand Six Hundred and Seventy-Four point Four Nine One	2074650.447	Twenty Lakh Seventy-Four Thousand Six Hundred and Fifty point Four Four Seven
24	76-120	76-120-10	M.S. Work for reinforcement with deformed M.S. bar, fy=414 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. 76-120-10: 8mm dia to 30mm dia	kg	15857.836	77.341	Seventy-Seven point Three Four One	1226460.894	Twelve Lakh Twenty-Six Thousand Four Hundred and Sixty point Eight Nine Four
			Formwork for centering and water tight shuttering as per						

25(a)	36-150	36-150-60	drawing with 14 BWG M.S. sheet, fitted and fixed with 40mmx40mmx6mm M.S. angle frame and 25mmx6mm 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. 36-150-60: Footing, footing beams, grade beams, foundation slab with 60-80mm dia barrack bamboo props.	sqm	185.330	735.351	Seven Hundred and Thirty-Five point Three Five One	136282.601	One Lakh Thirty-Six Thousand Two Hundred and Eighty-Two point Six Zero One
25(b)	36-150	36-150-10	Vertical and inclined walls, columns, piers with 60-80mm dia barrack bamboo props.	sqm	424.570	909.691	Nine Hundred and Nine point Six Nine One	386227.508	Three Lakh Eighty-Six Thousand Two Hundred and Twenty-Seven point Five Zero Eight
26	16-520	16-520-20	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. 16-520-20 : sand of FM>=1.50	cum	174.701	1420.061	One Thousand Four Hundred and Twenty point Zero Six One	248086.077	Two Lakh Forty-Eight Thousand AND Eighty-Six point Zero Seven Seven
27(a)	40-610	40-610-20	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: 40-610-20: Well graded between 40mm to 20mm size.	cum	20.772	3730.471	Three Thousand Seven Hundred and Thirty point Four Seven One	77489.344	Seventy-Seven Thousand Four Hundred and Eighty-Nine point Three Four Four
27(b)	40-610	40-610-30	Well graded between 20mm to 5mm size. (Combination of sub-item 10 & 30 or 20 & 30 shall be used)	cum	20.772	4076.091	Four Thousand AND Seventy-Six point Zero Nine One	84668.562	Eighty-Four Thousand Six Hundred and Sixty-Eight point Five Six Two
			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						Sixteen

28(a)	40-140	40-140-50	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. (a) 40-140-50 : block size 30cmx30cmx30cm.	nos	5288.000	317.011	Three Hundred and Seventeen point Zero One One	1676354.168	Sixteen Lakh Seventy-Six Thousand Three Hundred and Fifty-Four point One Six Eight
28(b)	40-140	40-140-40	40-140-40 :block size 40cmx40cmx20cm	nos	1503.000	381.461	Three Hundred and Eighty-One point Four Six One	573335.883	Five Lakh Seventy-Three Thousand Three Hundred and Thirty-Five point Eight Eight Three
29	40-220	40-220-10	Labour charge for protective works in laying CC blocks of different sizes including preparation of base, watering and ramming of base etc. complete as per direction of Engineer in charge. 40-220-10 : Within 200 m.	cum	214.880	1145.881	One Thousand One Hundred and Forty-Five point Eight Eight One	246226.909	Two Lakh Forty-Six Thousand Two Hundred and Twenty-Six point Nine Zero Nine
			Supplying and placing non-woven needle punched type geotextile fabric 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% polypropeline 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, equipments 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 accross the body of the fabric).Supplying and placing non-woven needle punched type geotextile fabric				One		Fifty-Three Thousand Four

30	40-600	40-600-20	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% polypropeline 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, equipments 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 accross the body of the fabric). 40-600-20 . Mass =>300 gm/m², thickness(Under 2 kpa pressure) =>2.00 mm, EoS<=0.11mm, strip tensile strength =>15 kn/m, grab strength =>850 N, CBR puncture resistance =>2200 N.	sqm	280.525	190.471	Hundred and Ninety point Four Seven One	53431.877	Four Hundred and Thirty-One point Eight Seven Seven
31	16-140	16-140-10	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. 16-140-10: 0 m to 3 m height	cum	2948.000	155.001	One Hundred and Fifty-Five point Zero Zero One	456942.948	Four Lakh Fifty-Six Thousand Nine Hundred and Forty-Two point Nine Four Eight
32	16-	16-	Earth work by manual labour in all kinds of soil in excavation or reexcavation of channels with the initial lead of 30m and lift of 1.5m including levelling, dressing and throwing the	cum	6110.000	130.001	One Hundred and Thirty	794306.110	Seven Lakh Ninety-Four Thousand

32	130	130	spoils to profile with breaking clods, rough dressing, clearing jungles including cutting trees upto 200mm girth, dug bailing etc. complete as per direction of Engineer in charge.	cum	6110.000	130.001	and Thirty point Zero Zero One	794306.110	Three Hundred and Six point One One
33	16-200	16-200	Extra rate for every additional lift of 1.00 meter part thereof beyond the initial lift of 1.5m (30 cm neglected) for all kinds of earth work. 1 no. lift	plt/cum	6110.000	10.991	Ten point Nine Nine One	67155.010	Sixty-Seven Thousand One Hundred and Fifty-Five point Zero One
34	16-220	16-220	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	2602.601	142.421	One Hundred and Forty-Two point Four Two One	370665.037	Three Lakh Seventy Thousand Six Hundred and Sixty-Five point Zero Three Seven
35	16-190	16-190	Extra rate for every additional lead of 15 m or part thereof beyond the initial lead of 30m up to a maximum of 19 leads (3m neglected) for all kinds of earth work 1 no lead	pld/cum	2602.601	14.571	Fourteen point Five Seven One	37922.499	Thirty-Seven Thousand Nine Hundred and Twenty-Two point Four Nine Nine
36	04-280	04-280-10	Constructing at site, cement mortar gauge on masonry wall, including engraving in meter, decimeter & centimeter, painting and figuring with black and red water proof paint, etc. complete as per direction of Engineer in charge. 04-280-10: 150mm x 25mm	m	4.200	77.731	Seventy-Seven point Seven Three One	326.470	Three Hundred and Twenty-Six point Four Seven
37	16-240	16-240	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, (minimun 15m apart from the bank) as per direction of Engineer in charge.	cum	1456.394	142.471	One Hundred and Forty-Two point Four Seven One	207493.910	Two Lakh Seven Thousand Four Hundred and Ninety-Three point Nine One
38	16-540	16-540-20	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. 16-540-20 : Sand of FM>=0.80	cum	503.380	600.001	Six Hundred point Zero Zero One	302028.503	Three Lakh Two Thousand AND Twenty-Eight point Five Zero Three
			Back filling in hydraulic						

39	16-530	16-530	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 ofEngineer in charge.	cum	603.437	159.491	One Hundred and Fifty-Nine point Four Nine One	96242.771	Ninety-Six Thousand Two Hundred and Forty-Two point Seven Seven One
40	48-100	48-100	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 (measurment will be given on well grown grass only), as per direction of Engineer in charge.	sqm	1189.000	26.171	Twenty-Six point One Seven One	31117.319	Thirty-One Thousand One Hundred and Seventeen point Three One Nine
							Grand Total:	13378974.650	One Crore Thirty-Three Lakh Seventy-Eight Thousand Nine Hundred and Seventy-Four point Six Five

This Bill Of Quantity -02-(Chitra khal causeway) is Electronically Signed by Mr. Ashim on behalf of Ashim Singh-M/S Subroto Suttradhar-M/S Pritom Enterprise (JV)

M/S. BHAWAL CONSTRUCTION

Bill Of Quantity -02-(Chitra khal causeway)

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)
8	04-120	04-120	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 morter on top (1:2), with inscription of "BWDB" with 25cm of the pillar balow ground level etc. complete including ramming the backfill and the cost of all materials as per direction of Engineer in charge.	each	5.000	1203.771	One Thousand Two Hundred and Three point Seven Seven One	6018.855	Six Thousand AND Eighteen point Eight Five Five
			Site preparation by manually removing all miscellaneous objectional materials form entire site and removing soil				Twenty-Seven		Two Lakh Forty-Nine Thousand

9	04-180	04-180	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	9000.000	27.721	Seven point Seven Two One	249489.000	Four Hundred and Eighty-Nine
10	12-100	12-100	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	6.000	2584.221	Two Thousand Five Hundred and Eighty-Four point Two Two One	15505.326	Fifteen Thousand Five Hundred and Five point Three Two Six
11	16-310	16-310-10	Earth work in excavation of foundation trenches in all kinds of soil as per layout plan of foundation excavation with all leads and lifts and placing the spoil earth for constructing the ring bundh/offerdam 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. 16-310-10 : For moving spoil earth upto a distance of 100m from the centre of the pit	cum	3029.399	246.711	Two Hundred and Forty-Six point Seven One One	747386.057	Seven Lakh Forty-Seven Thousand Three Hundred and Eighty-Six point Zero Five Seven
12	16-560	16-560-20	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. 16-560-20: By bamboo post of 6.0m length, c/c fixed with nails.	sqm	289.200	837.151	Eight Hundred and Thirty-Seven point One Five One	242104.069	Two Lakh Forty-Two Thousand One Hundred and Four point Zero Six Nine
13	12-310	12-310-20	Bailing out of water with all leads and lifts by manual labour or pump, with all arrengements 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. 12-310-20 : By pump.	cum	50971.286	6.131	Six point One Three One	312504.954	Three Lakh Twelve Thousand Five Hundred and Four point Nine Five Four
14	44-240	44-240-30	Supplying at site U-shape hot rolled steel sheet pile of different section of Phosphorus=0.04%(Maximum), Sulphur = 0.04% (Maximum), Copper= 0.25% (Minimum), 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. 44-240-30 : U-shape, hot-rolled steel sheet pile width= 400mm to 600mm: height=> 100mm, Th.= > 10.5: wt. per sqm of pile wall =>120 kg/m2:	Mton	12.888	145120.531	One Lakh Forty-Five Thousand One Hundred and Twenty point Five Three One	1870313.404	Eighteen Lakh Seventy Thousand Three Hundred and Thirteen point Four Zero Four

			sectional modulus per one meter of pile wall width => 874 cm3/m						
15	44-320	44-320-10	Cutting of steel sheet piles to design length and shape as per requirement in design and drawing and as per direction of Engineer in charge. 44-320-10 : Upto 10mm thick.	m	61.200	39.161	Thirty-Nine point One Six One	2396.653	Two Thousand Three Hundred and Ninety-Six point Six Five Three
16	12-300	12-300	Construction of sump well with dug holes of size 1.80 m x 2.0 m, laying in position the perforated empty diesel/petrol drum sheet of 1.00 m 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	10.000	17211.171	Seventeen Thousand Two Hundred and Eleven point One Seven One	172111.710	One Lakh Seventy-Two Thousand One Hundred and Eleven point Seven One
17	44-270	44-270-20	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. 44-270-20: U-type or any other type : Upto 4.50 m depth.	sqm	94.500	1250.751	One Thousand Two Hundred and Fifty point Seven Five One	118195.969	One Lakh Eighteen Thousand One Hundred and Ninety-Five point Nine Six Nine
18	72-180	72-180	Painting of steel sheet piles, 2 coats of bitumen paint, including preparation of surface with sand paper, iron brush etc. including the cost of all materials and labour etc. complete as per direction of Engineer in charge.	sqm	367.200	293.331	Two Hundred and Ninety-Three point Three Three One	107711.143	One Lakh Seven Thousand Seven Hundred and Eleven point One Four Three
19	44-310	44-310	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	45.900	461.801	Four Hundred and Sixty-One point Eight Zero One	21196.666	Twenty-One Thousand One Hundred and Ninety-Six point Six Six Six
		44	Supplying and laying single layer polythene sheet in floor below cement concrete, RCC				Thirty-		Eight Thousand Four Hundred

20	44-220	44-220-10	slab, on walls etc. complete in all respect as per direction of Engineer in charge. 44-220-10: Weighing minimum 1.0 kg per 6.50 sqm	sqm	271.690	31.221	One point Two Two One	8482.433	and Eighty-Two point Four Three Three
21	28-120	28-120-20	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. 28-120-20: With 25mm down graded stone chips.	cum	31.126	10954.481	Ten Thousand Nine Hundred and Fifty-Four point Four Eight One	340969.176	Three Lakh Forty Thousand Nine Hundred and Sixty-Nine point One Seven Six
22	28-100	28-100-20	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. 28-100-20 : With 25mm down graded stone chips	cum	1.620	10601.191	Ten Thousand Six Hundred and One point One Nine One	17173.929	Seventeen Thousand One Hundred and Seventy-Three point Nine Two Nine
23	28-200	28-200-10	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. 28-200-10 : with stone chips	cum	177.708	11674.491	Eleven Thousand Six Hundred and Seventy-Four point Four Nine One	2074650.447	Twenty Lakh Seventy-Four Thousand Six Hundred and Fifty point Four Four Seven
24	76-120	76-120-10	M.S. Work for reinforcement with deformed M.S. bar, fy=414 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. 76-120-10: 8mm dia to 30mm dia	kg	15857.836	77.341	Seventy-Seven point Three Four One	1226460.894	Twelve Lakh Twenty-Six Thousand Four Hundred and Sixty point Eight Nine Four
			Formwork for centering and water tight shuttering as per						

25(a)	36-150	36-150-60	drawing with 14 BWG M.S. sheet, fitted and fixed with 40mmx40mmx6mm M.S. angle frame and 25mmx6mm 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. 36-150-60: Footing, footing beams, grade beams, foundation slab with 60-80mm dia barrack bamboo props.	sqm	185.330	735.351	Seven Hundred and Thirty-Five point Three Five One	136282.601	One Lakh Thirty-Six Thousand Two Hundred and Eighty-Two point Six Zero One
25(b)	36-150	36-150-10	Vertical and inclined walls, columns, piers with 60-80mm dia barrack bamboo props.	sqm	424.570	909.691	Nine Hundred and Nine point Six Nine One	386227.508	Three Lakh Eighty-Six Thousand Two Hundred and Twenty-Seven point Five Zero Eight
26	16-520	16-520-20	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. 16-520-20 : sand of FM>=1.50	cum	174.701	1420.061	One Thousand Four Hundred and Twenty point Zero Six One	248086.077	Two Lakh Forty-Eight Thousand AND Eighty-Six point Zero Seven Seven
27(a)	40-610	40-610-20	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: 40-610-20: Well graded between 40mm to 20mm size.	cum	20.772	3730.471	Three Thousand Seven Hundred and Thirty point Four Seven One	77489.344	Seventy-Seven Thousand Four Hundred and Eighty-Nine point Three Four Four
27(b)	40-610	40-610-30	Well graded between 20mm to 5mm size. (Combination of sub-item 10 & 30 or 20 & 30 shall be used)	cum	20.772	4076.091	Four Thousand AND Seventy-Six point Zero Nine One	84668.562	Eighty-Four Thousand Six Hundred and Sixty-Eight point Five Six Two
			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						Sixteen

28(a)	40-140	40-140-50	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. (a) 40-140-50 : block size 30cmx30cmx30cm.	nos	5288.000	317.011	Three Hundred and Seventeen point Zero One One	1676354.168	Sixteen Lakh Seventy-Six Thousand Three Hundred and Fifty-Four point One Six Eight
28(b)	40-140	40-140-40	40-140-40 :block size 40cmx40cmx20cm	nos	1503.000	381.461	Three Hundred and Eighty-One point Four Six One	573335.883	Five Lakh Seventy-Three Thousand Three Hundred and Thirty-Five point Eight Eight Three
29	40-220	40-220-10	Labour charge for protective works in laying CC blocks of different sizes including preparation of base, watering and ramming of base etc. complete as per direction of Engineer in charge. 40-220-10 : Within 200 m.	cum	214.880	1145.881	One Thousand One Hundred and Forty-Five point Eight Eight One	246226.909	Two Lakh Forty-Six Thousand Two Hundred and Twenty-Six point Nine Zero Nine
			Supplying and placing non-woven needle punched type geotextile fabric 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% polypropeline 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, equipments 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 accross the body of the fabric).Supplying and placing non-woven needle punched type geotextile fabric				One		Fifty-Three Thousand Four

30	40-600	40-600-20	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% polypropeline 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, equipments 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 accross the body of the fabric). 40-600-20 . Mass =>300 gm/m², thickness(Under 2 kpa pressure) =>2.00 mm, EoS<=0.11mm, strip tensile strength =>15 kn/m, grab strength =>850 N, CBR puncture resistance =>2200 N.	sqm	280.525	190.471	Hundred and Ninety point Four Seven One	53431.877	Four Hundred and Thirty-One point Eight Seven Seven
31	16-140	16-140-10	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. 16-140-10: 0 m to 3 m height	cum	2948.000	187.791	One Hundred and Eighty-Seven point Seven Nine One	553607.868	Five Lakh Fifty-Three Thousand Six Hundred and Seven point Eight Six Eight
32	16-	16-	Earth work by manual labour in all kinds of soil in excavation or reexcavation of channels with the initial lead of 30m and lift of 1.5m including levelling, dressing and throwing the	cum	6110.000	142.471	One Hundred and Forty-Two point	870497.810	Eight Lakh Seventy Thousand Four Hundred

32	130	130	spoils to profile with breaking clods, rough dressing, clearing jungles including cutting trees upto 200mm girth, dug bailing etc. complete as per direction of Engineer in charge.	cum	6110.000	142.471	Two point Four Seven One	870497.810	Hundred and Ninety-Seven point Eight One
33	16-200	16-200	Extra rate for every additional lift of 1.00 meter part thereof beyond the initial lift of 1.5m (30 cm neglected) for all kinds of earth work. 1 no. lift	plt/cum	6110.000	10.991	Ten point Nine Nine One	67155.010	Sixty-Seven Thousand One Hundred and Fifty-Five point Zero One
34	16-220	16-220	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	2602.601	142.421	One Hundred and Forty-Two point Four Two One	370665.037	Three Lakh Seventy Thousand Six Hundred and Sixty-Five point Zero Three Seven
35	16-190	16-190	Extra rate for every additional lead of 15 m or part thereof beyond the initial lead of 30m up to a maximum of 19 leads (3m neglected) for all kinds of earth work 1 no lead	pld/cum	2602.601	14.571	Fourteen point Five Seven One	37922.499	Thirty-Seven Thousand Nine Hundred and Twenty-Two point Four Nine Nine
36	04-280	04-280-10	Constructing at site, cement mortar gauge on masonry wall, including engraving in meter, decimeter & centimeter, painting and figuring with black and red water proof paint, etc. complete as per direction of Engineer in charge. 04-280-10: 150mm x 25mm	m	4.200	77.731	Seventy-Seven point Seven Three One	326.470	Three Hundred and Twenty-Six point Four Seven
37	16-240	16-240	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, (minimun 15m apart from the bank) as per direction of Engineer in charge.	cum	1456.394	142.471	One Hundred and Forty-Two point Four Seven One	207493.910	Two Lakh Seven Thousand Four Hundred and Ninety-Three point Nine One
38	16-540	16-540-20	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. 16-540-20 : Sand of FM>=0.80	cum	503.380	757.751	Seven Hundred and Fifty-Seven point Seven Five One	381436.698	Three Lakh Eighty-One Thousand Four Hundred and Thirty-Six point Six Nine Eight
			Back filling in hydraulic						

39	16-530	16-530	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 ofEngineer in charge.	cum	603.437	159.491	One Hundred and Fifty-Nine point Four Nine One	96242.771	Ninety-Six Thousand Two Hundred and Forty-Two point Seven Seven One
40	48-100	48-100	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 (measurment will be given on well grown grass only), as per direction of Engineer in charge.	sqm	1189.000	26.171	Twenty-Six point One Seven One	31117.319	Thirty-One Thousand One Hundred and Seventeen point Three One Nine
							Grand Total:	13631239.006	One Crore Thirty-Six Lakh Thirty-One Thousand Two Hundred and Thirty-Nine point Zero Zero Six

This Bill Of Quantity -02-(Chitra khal causeway) is Electronically Signed by Mr. FAKHAR UDDIN AHMED on behalf of M/S. BHAWAL CONSTRUCTION