

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
CLUSTER NORTH  
PUNJAB RURAL SUSTAINABLE WATER SUPPLY AND SANITATION PROJECT**

**TEHSIL KOT MOMIN, DISTRICT SARGODHA VILLAGES (Kot Fateh Khan, Burj Ghulam Rasool, Bagri, Sughrewala, Fattuwalla, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**BILL OF QUANTITIES  
ABSTRACT OF COST**

<b>Sr. No</b>	<b>Description</b>	<b>Cost</b>
1	WATER SUPPLY SYSTEM	
2	SEWERAGE SYSTEM	
3	ROAD RESTORATION	
4	EMP COST	
5	EMPLOYER/ENGINEER'S FACILITIES	
<b>TOTAL</b>		
<b>ADD 5% (PRA charges)</b>		
<b>GRAND TOTAL</b>		
<b>Rs. in Million</b>		

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Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**WATER SUPPLY  
BILL OF QUANTITIES  
SUMMARY OF COST**

<b>Bill No.</b>	<b>Description</b>	<b>Cost</b>
1.1)	INSTALLATION OF EJECTOR PUMP	
1.2)	PUBLIC STAND POST INCLUDING FILTRATION	
1.3)	ELECTRIFICATION	
<b>TOTAL (WATER SUPPLY)</b>		

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**BILL OF QUANTITIES**

**Bill No. 1.1: INSTALLATION OF EJECTOR PUMP**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
1	23/1	Boring for tubewell in all types of soil except shingle and rock, from ground level to specific depth, including sinking and withdrawing of casing pipe, complete:- <b>1) Upto 0 to 100' depth</b> d) 6" (150 mm) i/d <b>2) Upto 101' to 200' depth</b> b) 6" (150 mm) i/d <b>3) Upto 201' to 300'</b> b) 6" (150 mm) i/d <b>4) Upto 301' to 400'</b> b) 6" (150 mm) i/d <b>5) Upto 401' to 500'</b> b) 6" (150 mm) i/d	Per R.Ft of Bore	2400		
			Per R.Ft of Bore	2320		
			Per R.Ft of Bore	2200		
			Per R.Ft of Bore	1600		
			Per R.Ft of Bore	1600		
2	23/13	Providing and installing P.V.C. blind pipe, B.S.S. in tubewell bore hole, including sockets and solvents and jointing with strainer, (PS-3051=BS-3505), etc. complete. <b>b) Class-D (12 bar)</b> v) 4" i/d (100 mm)	Per R.Ft	8646		
3	23/8	Providing and installing, P.V.C. strainer B.S.S. in tubewell bore hole, including sockets and solvents, etc. complete:- <b>b) Class-D</b> v) 4" i/d (100 mm)	Per R.Ft	1262		
4	23/11	Providing and installing P.V.C. Bail/End plug, in tubewell bore hole:- <b>b) B.S.S. Class 'D'</b> v) 4" i/d (100mm)	Per R.Ft	222		
5	23/17	Shrouding with graded pea gravel 3/8" to 1/8" (10 to 3 mm), around tubewell in bore hole.	cft	944.67		
6	23/31	Providing & mixing Bentonite clay / powder have swelling factor of 1200% for lining / seal and plug earthen boreholes / ponds in the specified ratio conforming to IS:6186 for stabilization of soil as specified by the designer etc complete in all respect.	Per Pounds	1619.4		
7	23/32	P/F Ejector Pump of specified Suction and Delivery heads, coupled with Single Phase Seimen Electric Motor of required rating for water supply i/c the cost of connection charges, necessary wire, PVC pipes etc complete in all respect as approved and directed by the Engineer Incharge. ii) G-IV (2-1/2" x 2") with 2.5 HP Electric Motor, 38-Mtr Suction and 38 M delivery head	Job	24		

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**BILL OF QUANTITIES**

**Bill No. 1.1: INSTALLATION OF EJECTOR PUMP**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
8	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(c) Reinforced cement concrete in Pile cap, slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a-d) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	Per Cft	768		
9	6/12	Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust)				
		(b) Deformed bars (ii)(Grade-60)	100 kg	24.48		
10	N/S	Taking samples at every 5 ft. or from each stratum as per direction of the Engineer including submission construction charts etc. and results of analysis.	Each	1692		
11	N/S	Geophysical logging of bore (self potential resistivity Both short normal and Gama) complete in all respect.	Job	24		
12	N/S	Physical & Chemical and Bacteriological Testing of Water	Per Sample	24		
<b>TOTAL</b>						-

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling in layers around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m). <b>1) Depth upto 5ft (1.5m)</b> 1) By Manual ii) Ordinary soil	1000 Cft	12.0		
2	26/43	Spraying termite proofing by using liquid FMC/ Biflex/ Terminex Exin/ Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability- HEXSTAR with Ratio (1:250) =540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10- years complete in all respect. as approved by the Engineer Incharge	Per Sft	14,918.4		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate). (h) Nominal mix Ratio 1: 3: 6	100 Cft	26.4		
4	7/4	Pacca brick work in foundation and plinth i) Cement, sand mortar Ratio 1 : 4	100 Cft	151.2		
5	6/37	Providing and laying damp proof course of cement concrete 1:2:4 (cement, sand, shingle), including bitumen coating. (b) with 2 coats of bitumen: i) 1½" thick (40 mm)	100 Sft	20.4		
6	6/39	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:- (b) with 2 coats of bitumen:- ii) Ratio 1:3  b) ¾" thick (20 mm)	100 Sft	20.4		
7	7/5	Pacca brick work in ground floor:- i) cement, sand mortar Ratio 1:4	100 Cft	142.8		

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
8	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (2) Type B (nominal mix 1: 1½: 3)	Cft	6,504.0		
		(c) Reinforced cement concrete in Pile cap, slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a-d) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (2) Type B (nominal mix 1: 1½: 3)	Cft	1,893.6		
9	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		(b) Deformed bars (ii)(Grade-60)	100 kg	250.8		
10	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor (crushed stone aggregate and bajri used in concrete items) Lead From Sargodah quarry				
			100 Cft	105.6		

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
11	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:- b) ½" (13 mm) thick	100 Sft	441.6		
12	11/10	Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height.  c) 1:4	100 Sft	104.4		
13	11/18	Cement pointing struck joints, on walls, upto 20' (6.00 m) height:- b) ratio 1:3	100 Sft	441.6		
14	3/15	Filling, watering and ramming earth under floors:- (i) with surplus earth from foundation, etc. (ii) with new earth excavated from out side, lead upto one chain (30m)	1000 Cft 1000 Cft	8.4 6.0		
15	3/16	Extra for every 50 ft. (15 m) additional lead or part thereof i) for earth work soft, ordinary, hard and very hard (up to 1000 ft)	1000 Cft	120.0		
16	10/4	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.	100 Cft	25.2		
17	10/22	Providing & Laying mosaic flooring consisting of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1" (25 mm) thick flooring of 1:2:4 cement concrete including rubbing and polishing complete with finishing :- 1½" (40 mm) thick mosaic flooring, consisting of ½" (13mm) mosaic topping (b) using white cement	100 Sft	38.4		
18	10/37	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½" (13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing: (b) using white cement : ii) ½" (13 mm) thick	100 Sft	7.2		
19	10/42	Providing and fixing marble strip of any shade for dividing the mosaic flooring into panels				

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
20	9/5	a) Size 1½" x3/8" (40 x 10 mm) Single layer of tiles 9"x4½"x1½" (225x113x40 mm) laid over 4"(100 mm) earth and 1" (25 mm) mud plaster without Bhoosa, grouted with cement sand 1:3 on top of RCC roof slab, provided with 34 lbs.per %Sft. or 1.72 Kg/Sq.m bitumen coating sand blinded.	Rft	360.0		
21	26/38	Supplying and laying polythene sheet over D.P.C under floors and on roofs, etc. ( i ) 300 gauge (0.003" thick)	100 Sft	72.0		
22	9/15	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	Sft	7,200.0		
23	9/16	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4½" (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	Each	24.0		
24	10/10	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.	Each	24.0		
25	12/60 (b)	P/F ¾" dia heavy duty sliding bolt of specified material i/c the cost of hardware omplete in all respect as approved and directed by the Engineer Incharge. b) brass sliding bolt, 10" (250 mm) long	100 Sft	52.8		
26	11/23	Priming coat of chalk under distemper.	Each	24.0		
27	11/24	Distemping ( a ) new surface ii) two coats	100 Sft	198.0		
28	10/45	Providing and laying superb quality Porcelain glazed tiles flooring of Master /Stile brand or approved equivalent manufacturer of specified size in approved design, Color and Shade with adhesive/ bond over ¾" thick (1:3) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respect as approved and directed by the Engineer Incharge. a) Full body Glazed Tile (i) 400 mmX400 mm	Per Sft	2,138.4		

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
29	25/62	P/F Iron door comprising of specified leaves made of 1-1/4" x1-1/4" x3/16" MS angle iron for leaf frame, diagonal and horizontal braces duly welded with MS. sheet 18-SWG i/c the cost of sliding bolt, tower bolt and painting 3-coats but excluding the cost of Chowkat complete in all respect as approved and directed by the Engineer incharge.				
		(ii) Double Leaf	Per Sft	588.0		
30	12/17	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed/ welded/ supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6-Nos) welded/ screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge.				
		(ii) 10.50 " wide	Per Sft	588.0		
31	25/42	Providing and fixing steel windows using M.S. sheet (16 SWG) moulded tubular pipe 1½"x1½" (40x40mm) for frame and 1¼"x1¼" (30x30mm) for leaves including M.S. square bars ¼"x¼" (6x6 mm) welded around each panel of frame, 5 mm thick glass panes fixed with double M.S. square tubular pipe 3/8"x3/8" (10x10mm) (22 SWG) beading with U' shaped rubber lining, brass fitting, holdfast, including painting three coats complete in all respects. a) For openable panels fixed with wire gauze 24 SWG, 12x12 mesh and glass panes ¼" (6 mm) thick.				
			Per Sft	864.0		
32	19/47 (v)	Providing and fixing uPVC rain water down pipe 110mm dia with shoe, bend, clamp etc.	Rft	312.0		

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
33	N/S	<p>Design, Supply, Install, Testing and Commissioning of water filtration plant, capable of removing Turbidity and Bacteria &amp; Viruses, having capacity of 2000 litres/ hour, and fully automated (Auto filtration, flush and backwash process) complete in all respects as per drawings, specifications and directions of the Engineer. The major components include;</p> <p>Feed/ Backwash Pump (Stainless Steel, NEMA Insulation Class F and Pump Efficiency <math>\geq</math> 50%)</p> <p>Silica Sand Media (Suspended Solids Removal upto 100 micron)</p> <p>Activated Carbon Media (Coconut shells, NSF Certified Manufacturer)</p> <p>FRP Vessels (OP 150 psi, NSF Certified)</p> <p>Screen Filter (Washable, 70-100 Micron, Stainless Steel)</p> <p>UV Sterilizeer of well-reputed brand in SS Vessel</p> <p>Raw and Product Water Tanks (500 Gallons, Food Garde Material)</p> <p>Pressure Gauges, Rotameters, Flow Meters, Level Switches/ Sensors, Multiport valves</p> <p>Stainless Steel 304 Frame Skid Panel</p> <p>Control panel skid for complete automation and manual operation</p> <p>Pipe work including feed water pipe line connection and delivery pipeline and necessary gate and flow regulating valves.</p> <p>Providing and fixing steel water taps including header.</p> <p>uPVC pipe and all necessary arrangements to drain off the spent/ waste water as per direction of Engineer.</p>	No.	24.0		

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
	<b>B</b>	<b>SOAKAGE PIT</b>				
34	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling in layers around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m).				
		<b>1) By Manual</b>				
		ii) Ordinary soil	1000 Cft.	8.7		
35	10/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	2.4		
36	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): <b>(h) Ratio 1: 3: 6</b>	100 Cft.	3.8		
37	7/7	Pacca brick work other than building upto 10ft. (3 m) height. 1:3	100Cft	19.4		
38	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-  (a) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (1) Type A (nominal mix 1:1:2)	Cft.	352.1		

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
39	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and steel chairs, etc. complete in all respect. and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also Includes removal of rust from bars):- (c) Deformed bars (Grade-60)	100 Kg	11.2		
40	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead from approved nearby quarry	1000Cft	6.0		
41	23/17	Shrouding with graded pea gravel 3/8" to 1/8" (10 to 3 mm), around tubewell in bore hole.	Per Cft	960.0		
42	3/5	Earthwork in ordinary soil for embankments lead upto 100 ft. (30 m), including ploughing, mixing and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- i) 95% to 100% maximum modified AASHTO dry density.	1000 Cft.	31.2		
<b>Total Amount</b>						

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**BILL OF QUANTITIES**

**Bill No. 1.1.4: ELECTRIFICATION**

Sr. No.	M.R.S (Item/Chap)	Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
					In Figure	
<b>1.0</b>		<b><u>WIRING AND ACCESSORIES</u></b>				
1.1	8(c-ii)/24, 3(iii)/24, 16(i)/24, 34(ii)/24	Wiring of light or fan point from switch board/dimmer to the point with 3x1.5 mm <sup>2</sup> (P+N+E) PVC insulated single core stranded cables in 25 mm PVC conduit/pipe concealed in walls, columns and slabs including accessories, PVC box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan and installed as in specifications complete in all respects.	Each	288		
1.2	8(c-iii)/24, 3(iii)/24	Circuit wiring from DB/ MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm <sup>2</sup> (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	96		
1.3	8(c-ii)/24, 3(iii)/24	The same as item No. 1.1 but from one light point to another light point.	Each	480		
1.4	8(c-iv)/24, 17(ii)/24, 39(i)/24, 3(iii)/24	10/13 Amp 3 pin universal flush mounting switch socket outlet wired from DB/MCBs to first outlet with 3x4 mm <sup>2</sup> (P+N+E) single core cable stranded (away from switch board) in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	72		
1.5	8(c-iii)/24, 3(iii)/24, 16(ii), 38(i)	The same as item No.1.4 but wiring from one socket outlet to another socket outlet with 3x2.5 mm <sup>2</sup> (P+N+E) single core stranded cable in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	72		
1.6	8(c-v)/24, 3(iii)/24, 38(ii)/24, 16(ii)/24	15/20 Amp 3 pin mounting switch socket outlet wired from DB MCBs to independent socket outlet with 3x6 mm <sup>2</sup> (P+N+E) single core stranded cable (away from switchboard) in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	72		
<b>2.0</b>		<b><u>DISTRIBUTION BOARDS</u></b>				
p		D.Bs with TP incoming adjustable moulded case circuit breaker and SP miniature outgoing circuit breakers, Panel box SWG 16 powder coated RAL colour 7032, IP class 44 and with all accessories. alongwith all installation and operational accessories as per specification or as shown on the drawings.				

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
CLUSTER NORTH**

**PUNJAB RURAL SUSTAINABLE WATER SUPPLY AND SANITATION PROJECT**

**TEHSIL KOT MOMIN, DISTRICT SARGODHA VILLAGES (Kot Fateh Khan, Burj Ghulam Rasool, Bagri, Sughrewala, Fattuwalla, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**BILL OF QUANTITIES**

**Bill No. 1.1.4: ELECTRIFICATION**

Sr. No.	M.R.S (Item/Chap)	Description	Unit	Qty.	Rate (Rs.)	Amount
					In Figure	(Rs.)
2.1	85(b-iii)/24, 85(a-iii)/24, 94(i)/24, 94(ii)/24, 94(iv)/24, 94(iii)/24, 94(v)/24, 94(vi)/24, 94(xv)/24	<p><b><u>DB- Room</u></b></p> <p>01 No. Incoming 25 Amps (Adj.) MCCB TP 25kA Icu=100%lcs</p> <p>05 Nos. outgoing 10A, MCB, SP, RC=10 kA, Icu=100%lcs</p> <p>04 Nos. outgoing 20A, MCB, SP, RC=10 kA, Icu=100%lcs</p> <p>03 Nos. outgoing 10A, MCB, SP, RC=10 kA, Icu=100%lcs (Spare)</p> <p>P/F wall mounted DB (Distribution Board) 6" deep, 20~60A, made with 16SWG Sheet (Recessed/Surf ace mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural &amp; Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Swi tch, Ammeter selector switch, Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately).</p>	Each	24		
3.0		<p><b><u>Conduits / Pipes</u></b></p>				
3.2	27(e)/23, 6/3	PVC pipe/conduit Class-D 100 mm dia with accessories suitable for laying multi-core cables in trenches/directly burried on road crossings including excavation.	Rft.	2,400		
4.0		<p><b><u>FANS &amp; ACCESSORIES</u></b></p>				
4.1		Providing and fixing Copper Winded Exhaust Fan with louver and shutter made of Pak/Younas/G.F.C. i/c the cost of necessary cable and hardware for connection from ceiling rose complete as approved and directed by Engineer Incharge.				
		<p><b>b) Steel body</b></p>				
i)	102(b-ii)/24	18" dia	Each	72		
4.2		Providing and fixing Copper winded wall bracket fan made of Pak/Younas/G.F.C or NEECA approved equivalent i/c the cost of necessary cable and hardware for connection as approved and directed by Engineer				
i)	103(i)/24	18" Sweep dia	Each	96		
5.0		<p><b><u>Power Cables</u></b></p>				
5.1		Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only)				
		PVC insulated, PVC sheathed 2 core, 600/1000 volt non armoured cable				
(a)	11(c-vi)/24	10 mm (7/0.052") For 10HP Motor	Rft.	4,800		

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**BILL OF QUANTITIES**

**Bill No. 1.1.4: ELECTRIFICATION**

Sr. No.	M.R.S (Item/Chap)	Description	Unit	Qty.	Rate (Rs.)	Amount
					In Figure	(Rs.)
5.2		Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only)				
(a)	8(c-vi)/24	450/750 volts, PVC insulated: 10 mm sq (7/0.052")	Rft.	7,200		
<b>6.0</b>		<b><u>EARTHING</u></b>				
6.1	111 /24	Providing,making & testing/commissionin of Rod type Earth point comprising of 5/8"dia.(16mmdia)10ft long copper coated M.S.rod driven in ground duly fixed with clamp with Tinned earth test link copper plate (300x50x10mm),i/c the cost of brass nuts,spacers,bolts washers lugs etc but excluding the cost of copper strand & manhole. as approved and directed by Engineer Incharge <b>(Rod Type Earthing)</b> .	Each	48		
		<b>TOTAL</b>				-

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**BILL OF QUANTITIES**

**Bill No. 1.1.4: ELECTRIFICATION**

<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty.</b>	<b>Unit Rate (Rs.)</b>	<b>Total Amount (Rs.)</b>
	Design, Supply, transportation at site, storage, installation, testing and commissioning of the following items of work (unless specifically stated otherwise) including all material, labour, tools and accessories etc. required for proper completion of each item as per specification and drawings and/or as directed by the Engineer.				
<b>1.0</b>	<b><u>LIGHT FITTINGS AND FANS</u></b>				
	Following LED Luminaries of suitable wattage make suitable for the project requirements. Contractor to submit lighting design calculation to determine the adequacy of the wattage and should adjust the number of LEDs/wattage as per project lighting requirements. The fitting shall be approved by the Engineer.				
1.1	Light Fixture Type LED Batten Ceiling/surface mounted, 18W complete in all respect with allied accessories make Philips, GE,Pierlite or approved equivalent. The fitting shall be approved by the Engineer.	Each	192		
1.2	Wall bracket Light Fixture Type LED 12 Watt energy saving lamp with holder and complete in all respect with allied accessories. The fitting shall be approved by the Engineer.	Each	48		
1.3	20W LED Water tight light fixture IP 65 complete in all respect with all allied accessories. The fitting shall be approved by the Engineer.	Each	144		
<b>TOTAL NON MRS</b>					-
<b>TOTAL MRS + NON MRS</b>					-

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Bagri, Sughrewala, Fattuwala, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd,  
Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**WATER SUPPLY  
BILL OF QUANTITIES  
SUMMARY OF COST**

<b>Bill No.</b>	<b>Description</b>	<b>Cost</b>
1.1)	INSTALLATION OF EJECTOR PUMP	
1.2)	PUBLIC STAND POST INCLUDING FILTRATION	
1.3)	ELECTRIFICATION	
<b>TOTAL (WATER SUPPLY)</b>		

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
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**BILL OF QUANTITIES**

**Bill No. 1.1: INSTALLATION OF EJECTOR PUMP**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
1	23/1	Boring for tubewell in all types of soil except shingle and rock, from ground level to specific depth, including sinking and withdrawing of casing pipe, complete:- <b>1) Upto 0 to 100' depth</b> d) 6" (150 mm) i/d <b>2) Upto 101' to 200' depth</b> b) 6" (150 mm) i/d <b>3) Upto 201' to 300'</b> b) 6" (150 mm) i/d <b>4) Upto 301' to 400'</b> b) 6" (150 mm) i/d <b>5) Upto 401' to 500'</b> b) 6" (150 mm) i/d	Per R.Ft of Bore	2400		
			Per R.Ft of Bore	2320		
			Per R.Ft of Bore	2200		
			Per R.Ft of Bore	1600		
			Per R.Ft of Bore	1600		
2	23/13	Providing and installing P.V.C. blind pipe, B.S.S. in tubewell bore hole, including sockets and solvents and jointing with strainer, (PS-3051=BS-3505), etc. complete. <b>b) Class-D (12 bar)</b> v) 4" i/d (100 mm)	Per R.Ft	8646		
3	23/8	Providing and installing, P.V.C. strainer B.S.S. in tubewell bore hole, including sockets and solvents, etc. complete:- <b>b) Class-D</b> v) 4" i/d (100 mm)	Per R.Ft	1262		
4	23/11	Providing and installing P.V.C. Bail/End plug, in tubewell bore hole:- <b>b) B.S.S. Class 'D'</b> v) 4" i/d (100mm)	Per R.Ft	222		
5	23/17	Shrouding with graded pea gravel 3/8" to 1/8" (10 to 3 mm), around tubewell in bore hole.	cft	944.67		
6	23/31	Providing & mixing Bentonite clay / powder have swelling factor of 1200% for lining / seal and plug earthen boreholes / ponds in the specified ratio conforming to IS:6186 for stabilization of soil as specified by the designer etc complete in all respect.	Per Pounds	1619.4		
7	23/32	P/F Ejector Pump of specified Suction and Delivery heads, coupled with Single Phase Seimen Electric Motor of required rating for water supply i/c the cost of connection charges, necessary wire, PVC pipes etc complete in all respect as approved and directed by the Engineer Incharge. ii) G-IV (2-1/2" x 2") with 2.5 HP Electric Motor, 38-Mtr Suction and 38 M delivery head	Job	24		

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**BILL OF QUANTITIES**

**Bill No. 1.1: INSTALLATION OF EJECTOR PUMP**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
8	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(c) Reinforced cement concrete in Pile cap, slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a-d) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	Per Cft	768		
9	6/12	Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust)				
		(b) Deformed bars (ii)(Grade-60)	100 kg	24.48		
10	N/S	Taking samples at every 5 ft. or from each stratum as per direction of the Engineer including submission construction charts etc. and results of analysis.	Each	1692		
11	N/S	Geophysical logging of bore (self potential resistivity Both short normal and Gama) complete in all respect.	Job	24		
12	N/S	Physical & Chemical and Bacteriological Testing of Water	Per Sample	24		
<b>TOTAL</b>						-

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling in layers around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m). <b>1) Depth upto 5ft (1.5m)</b> 1) By Manual ii) Ordinary soil	1000 Cft	12.0		
2	26/43	Spraying termite proofing by using liquid FMC/ Biflex/ Terminex Exin/ Ms Hextar or equivalent @ specified suspension concentrate (SC), Mixing Ability- HEXSTAR with Ratio (1:250) =540 Sft or equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10- years complete in all respect. as approved by the Engineer Incharge	Per Sft	14,918.4		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate). (h) Nominal mix Ratio 1: 3: 6	100 Cft	26.4		
4	7/4	Pacca brick work in foundation and plinth i) Cement, sand mortar Ratio 1 : 4	100 Cft	151.2		
5	6/37	Providing and laying damp proof course of cement concrete 1:2:4 (cement, sand, shingle), including bitumen coating. (b) with 2 coats of bitumen: i) 1½" thick (40 mm)	100 Sft	20.4		
6	6/39	Providing and laying vertical damp proof course with cement sand plaster and bitumen coating:- (b) with 2 coats of bitumen:- ii) Ratio 1:3  b) ¾" thick (20 mm)	100 Sft	20.4		
7	7/5	Pacca brick work in ground floor:- i) cement, sand mortar Ratio 1:4	100 Cft	142.8		

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
8	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (2) Type B (nominal mix 1: 1½: 3)	Cft	6,504.0		
		(c) Reinforced cement concrete in Pile cap, slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a-d) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (2) Type B (nominal mix 1: 1½: 3)	Cft	1,893.6		
9	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		(b) Deformed bars (ii)(Grade-60)	100 kg	250.8		
10	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor (crushed stone aggregate and bajri used in concrete items) Lead From Sargodah quarry				
			100 Cft	105.6		

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
11	11/9	Cement plaster 1:4 upto 20' (6.00 m) height:- b) ½" (13 mm) thick	100 Sft	441.6		
12	11/10	Cement plaster 3/8" (10 mm) thick under soffit of R.C.C. roof slabs only, upto 20' height.  c) 1:4	100 Sft	104.4		
13	11/18	Cement pointing struck joints, on walls, upto 20' (6.00 m) height:- b) ratio 1:3	100 Sft	441.6		
14	3/15	Filling, watering and ramming earth under floors:- (i) with surplus earth from foundation, etc. (ii) with new earth excavated from out side, lead upto one chain (30m)	1000 Cft 1000 Cft	8.4 6.0		
15	3/16	Extra for every 50 ft. (15 m) additional lead or part thereof i) for earth work soft, ordinary, hard and very hard (up to 1000 ft)	1000 Cft	120.0		
16	10/4	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.	100 Cft	25.2		
17	10/22	Providing & Laying mosaic flooring consisting of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1" (25 mm) thick flooring of 1:2:4 cement concrete including rubbing and polishing complete with finishing :- 1½" (40 mm) thick mosaic flooring, consisting of ½" (13mm) mosaic topping (b) using white cement	100 Sft	38.4		
18	10/37	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½" (13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing: (b) using white cement : ii) ½" (13 mm) thick	100 Sft	7.2		
19	10/42	Providing and fixing marble strip of any shade for dividing the mosaic flooring into panels				

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
20	9/5	a) Size 1½" x3/8" (40 x 10 mm) Single layer of tiles 9"x4½"x1½" (225x113x40 mm) laid over 4"(100 mm) earth and 1" (25 mm) mud plaster without Bhoosa, grouted with cement sand 1:3 on top of RCC roof slab, provided with 34 lbs.per %Sft. or 1.72 Kg/Sq.m bitumen coating sand blinded.	Rft	360.0		
21	26/38	Supplying and laying polythene sheet over D.P.C under floors and on roofs, etc. ( i ) 300 gauge (0.003" thick)	100 Sft	72.0		
22	9/15	Khuras on roof 2'x2'x6" (600 x 600 x 150 mm)	Sft	7,200.0		
23	9/16	Bottom Khuras of brick masonry in cement mortar 1:6, 4'x2'x4½" (1200x600x113 mm) over 3" (75 mm) cement concrete 1:4:8.	Each	24.0		
24	10/10	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.	Each	24.0		
25	12/60 (b)	P/F 3/4" dia heavy duty sliding bolt of specified material i/c the cost of hardware omplete in all respect as approved and directed by the Engineer Incharge. b) brass sliding bolt, 10" (250 mm) long	100 Sft	52.8		
26	11/23	Priming coat of chalk under distemper.	Each	24.0		
27	11/24	Distemping ( a ) new surface ii) two coats	100 Sft	198.0		
28	10/45	Providing and laying superb quality Porcelain glazed tiles flooring of Master /Stile brand or approved equivalent manufacturer of specified size in approved design, Color and Shade with adhesive/ bond over 3/4" thick (1:3) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respect as approved and directed by the Engineer Incharge. a) Full body Glazed Tile (i) 400 mmX400 mm	Per Sft	2,138.4		

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
29	25/62	P/F Iron door comprising of specified leaves made of 1-1/4" x1-1/4" x3/16" MS angle iron for leaf frame, diagonal and horizontal braces duly welded with MS. sheet 18-SWG i/c the cost of sliding bolt, tower bolt and painting 3-coats but excluding the cost of Chowkat complete in all respect as approved and directed by the Engineer incharge.				
		(ii) Double Leaf	Per Sft	588.0		
30	12/17	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed/ welded/ supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6-Nos) welded/ screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge.				
		(ii) 10.50 " wide	Per Sft	588.0		
31	25/42	Providing and fixing steel windows using M.S. sheet (16 SWG) moulded tubular pipe 1½"x1½" (40x40mm) for frame and 1¼"x1¼" (30x30mm) for leaves including M.S. square bars ¼"x¼" (6x6 mm) welded around each panel of frame, 5 mm thick glass panes fixed with double M.S. square tubular pipe 3/8"x3/8" (10x10mm) (22 SWG) beading with U' shaped rubber lining, brass fitting, holdfast, including painting three coats complete in all respects. a) For openable panels fixed with wire gauze 24 SWG, 12x12 mesh and glass panes ¼" (6 mm) thick.				
			Per Sft	864.0		
32	19/47 (v)	Providing and fixing uPVC rain water down pipe 110mm dia with shoe, bend, clamp etc.	Rft	312.0		

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
33	N/S	<p>Design, Supply, Install, Testing and Commissioning of water filtration plant, capable of removing Turbidity and Bacteria &amp; Viruses, having capacity of 2000 litres/ hour, and fully automated (Auto filtration, flush and backwash process) complete in all respects as per drawings, specifications and directions of the Engineer. The major components include;</p> <p>Feed/ Backwash Pump (Stainless Steel, NEMA Insulation Class F and Pump Efficiency ≥ 50%)</p> <p>Silica Sand Media (Suspended Solids Removal upto 100 micron)</p> <p>Activated Carbon Media (Coconut shells, NSF Certified Manufacturer)</p> <p>FRP Vessels (OP 150 psi, NSF Certified)</p> <p>Screen Filter (Washable, 70-100 Micron, Stainless Steel)</p> <p>UV Sterilizeer of well-reputed brand in SS Vessel</p> <p>Raw and Product Water Tanks (500 Gallons, Food Garde Material)</p> <p>Pressure Gauges, Rotameters, Flow Meters, Level Switches/ Sensors, Multiport valves</p> <p>Stainless Steel 304 Frame Skid Panel</p> <p>Control panel skid for complete automation and manual operation</p> <p>Pipe work including feed water pipe line connection and delivery pipeline and necessary gate and flow regulating valves.</p> <p>Providing and fixing steel water taps including header.</p> <p>uPVC pipe and all necessary arrangements to drain off the spent/ waste water as per direction of Engineer.</p>	No.	24.0		

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
CLUSTER NORTH  
PUNJAB RURAL SUSTAINABLE WATER SUPPLY AND SANITATION PROJECT**

**TEHSIL KOT MOMIN, DISTRICT SARGODHA VILLAGES (Kot Fateh Khan, Burj Ghulam Rasool, Bagri, Sughrewala, Fattuwala, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
	<b>B</b>	<b>SOAKAGE PIT</b>				
34	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling in layers around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m).				
		<b>1) By Manual</b>				
		ii) Ordinary soil	1000 Cft.	8.7		
35	10/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	2.4		
36	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		<b>(h) Ratio 1: 3: 6</b>	100 Cft.	3.8		
37	7/7	Pacca brick work other than building upto 10ft. (3 m) height. 1:3	100Cft	19.4		
38	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
		(1) Type A (nominal mix 1:1:2)	Cft.	352.1		

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**BILL OF QUANTITIES**

**Bill No. 1.2: PUBLIC STAND POST INCLUDING FILTRATION**

Sr. No.	Ref	Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
39	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and steel chairs, etc. complete in all respect. and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also Includes removal of rust from bars):- (c) Deformed bars (Grade-60)	100 Kg	11.2		
40	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead from approved nearby quarry	1000Cft	6.0		
41	23/17	Shrouding with graded pea gravel 3/8" to 1/8" (10 to 3 mm), around tubewell in bore hole.	Per Cft	960.0		
42	3/5	Earthwork in ordinary soil for embankments lead upto 100 ft. (30 m), including ploughing, mixing and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- i) 95% to 100% maximum modified AASHTO dry density.	1000 Cft.	31.2		
<b>Total Amount</b>						

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
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TEHSIL KOT MOMIN, DISTRICT SARGODHA VILLAGES (Kot Fateh Khan, Burj Ghulam Rasool, Bagri, Sughrewala, Fattuwalla, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**BILL OF QUANTITIES**

**Bill No. 1.1.4: ELECTRIFICATION**

Sr. No.	M.R.S (Item/Chap)	Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
					In Figure	
<b>1.0</b>		<b><u>WIRING AND ACCESSORIES</u></b>				
1.1	8(c-ii)/24, 3(iii)/24, 16(i)/24, 34(ii)/24	Wiring of light or fan point from switch board/dimmer to the point with 3x1.5 mm <sup>2</sup> (P+N+E) PVC insulated single core stranded cables in 25 mm PVC conduit/pipe concealed in walls, columns and slabs including accessories, PVC box, 10 Amp. gang switch 1 or 2 way as required, one for each light or fan and installed as in specifications complete in all respects.	Each	288		
1.2	8(c-iii)/24, 3(iii)/24	Circuit wiring from DB/ MCBs to gang switches board and from switch board to another switch board with 3x2.5 mm <sup>2</sup> (P+N+E) PVC insulated single core stranded cables in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	96		
1.3	8(c-ii)/24, 3(iii)/24	The same as item No. 1.1 but from one light point to another light point.	Each	480		
1.4	8(c-iv)/24, 17(ii)/24, 39(i)/24, 3(iii)/24	10/13 Amp 3 pin universal flush mounting switch socket outlet wired from DB/MCBs to first outlet with 3x4 mm <sup>2</sup> (P+N+E) single core cable stranded (away from switch board) in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	72		
1.5	8(c-iii)/24, 3(iii)/24, 16(ii), 38(i)	The same as item No.1.4 but wiring from one socket outlet to another socket outlet with 3x2.5 mm <sup>2</sup> (P+N+E) single core stranded cable in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	72		
1.6	8(c-v)/24, 3(iii)/24, 38(ii)/24, 16(ii)/24	15/20 Amp 3 pin mounting switch socket outlet wired from DB MCBs to independent socket outlet with 3x6 mm <sup>2</sup> (P+N+E) single core stranded cable (away from switchboard) in 25mm PVC pipe/conduit concealed in walls, columns and slabs as required complete in all respects.	Each	72		
<b>2.0</b>		<b><u>DISTRIBUTION BOARDS</u></b>				
p		D.Bs with TP incoming adjustable moulded case circuit breaker and SP miniature outgoing circuit breakers, Panel box SWG 16 powder coated RAL colour 7032, IP class 44 and with all accessories. alongwith all installation and operational accessories as per specification or as shown on the drawings.				

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
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**PUNJAB RURAL SUSTAINABLE WATER SUPPLY AND SANITATION PROJECT**

**TEHSIL KOT MOMIN, DISTRICT SARGODHA VILLAGES (Kot Fateh Khan, Burj Ghulam Rasool, Bagri, Sughrewala, Fattuwalla, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**BILL OF QUANTITIES**

**Bill No. 1.1.4: ELECTRIFICATION**

Sr. No.	M.R.S (Item/Chap)	Description	Unit	Qty.	Rate (Rs.)	Amount
					In Figure	(Rs.)
2.1	85(b-iii)/24, 85(a-iii)/24, 94(i)/24, 94(ii)/24, 94(iv)/24, 94(iii)/24, 94(v)/24, 94(vi)/24, 94(xv)/24	<p><b><u>DB- Room</u></b></p> <p>01 No. Incoming 25 Amps (Adj.) MCCB TP 25kA Icu=100%lcs</p> <p>05 Nos. outgoing 10A, MCB, SP, RC=10 kA, Icu=100%lcs</p> <p>04 Nos. outgoing 20A, MCB, SP, RC=10 kA, Icu=100%lcs</p> <p>03 Nos. outgoing 10A, MCB, SP, RC=10 kA, Icu=100%lcs (Spare)</p> <p>P/F wall mounted DB (Distribution Board) 6" deep, 20~60A, made with 16SWG Sheet (Recessed/Surf ace mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural &amp; Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Swi tch, Ammeter selector switch, Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately).</p>	Each	24		
3.0		<p><b><u>Conduits / Pipes</u></b></p>				
3.2	27(e)/23, 6/3	PVC pipe/conduit Class-D 100 mm dia with accessories suitable for laying multi-core cables in trenches/directly burried on road crossings including excavation.	Rft.	2,400		
4.0		<p><b><u>FANS &amp; ACCESSORIES</u></b></p>				
4.1		Providing and fixing Copper Winded Exhaust Fan with louver and shutter made of Pak/Younas/G.F.C. i/c the cost of necessary cable and hardware for connection from ceiling rose complete as approved and directed by Engineer Incharge.				
		<p><b>b) Steel body</b></p>				
i)	102(b-ii)/24	18" dia	Each	72		
4.2		Providing and fixing Copper winded wall bracket fan made of Pak/Younas/G.F.C or NEECA approved equivalent i/c the cost of necessary cable and hardware for connection as approved and directed by Engineer				
i)	103(i)/24	18" Sweep dia	Each	96		
5.0		<p><b><u>Power Cables</u></b></p>				
5.1		Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only)				
		PVC insulated, PVC sheathed 2 core, 600/1000 volt non armoured cable				
(a)	11(c-vi)/24	10 mm (7/0.052") For 10HP Motor	Rft.	4,800		

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
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**BILL OF QUANTITIES**

**Bill No. 1.1.4: ELECTRIFICATION**

Sr. No.	M.R.S (Item/Chap)	Description	Unit	Qty.	Rate (Rs.)	Amount
					In Figure	(Rs.)
5.2		Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only)				
(a)	8(c-vi)/24	450/750 volts, PVC insulated: 10 mm sq (7/0.052")	Rft.	7,200		
<b>6.0</b>		<b><u>EARTHING</u></b>				
6.1	111 /24	Providing,making & testing/commissionin of Rod type Earth point comprising of 5/8"dia.(16mmdia)10ft long copper coated M.S.rod driven in ground duly fixed with clamp with Tinned earth test link copper plate (300x50x10mm),i/c the cost of brass nuts,spacers,bolts washers lugs etc but excluding the cost of copper strand & manhole. as approved and directed by Engineer Incharge <b>(Rod Type Earthing)</b> .	Each	48		
		<b>TOTAL</b>				-

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**BILL OF QUANTITIES**

**Bill No. 1.1.4: ELECTRIFICATION**

<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty.</b>	<b>Unit Rate (Rs.)</b>	<b>Total Amount (Rs.)</b>
	Design, Supply, transportation at site, storage, installation, testing and commissioning of the following items of work (unless specifically stated otherwise) including all material, labour, tools and accessories etc. required for proper completion of each item as per specification and drawings and/or as directed by the Engineer.				
<b>1.0</b>	<b><u>LIGHT FITTINGS AND FANS</u></b>				
	Following LED Luminaries of suitable wattage make suitable for the project requirements. Contractor to submit lighting design calculation to determine the adequacy of the wattage and should adjust the number of LEDs/wattage as per project lighting requirements. The fitting shall be approved by the Engineer.				
1.1	Light Fixture Type LED Batten Ceiling/surface mounted, 18W complete in all respect with allied accessories make Philips, GE,Pierlite or approved equivalent. The fitting shall be approved by the Engineer.	Each	192		
1.2	Wall bracket Light Fixture Type LED 12 Watt energy saving lamp with holder and complete in all respect with allied accessories. The fitting shall be approved by the Engineer.	Each	48		
1.3	20W LED Water tight light fixture IP 65 complete in all respect with all allied accessories. The fitting shall be approved by the Engineer.	Each	144		
<b>TOTAL NON MRS</b>					-
<b>TOTAL MRS + NON MRS</b>					-



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Bagri, Sughrewala, Fattuwala, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd,  
Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**SEWERAGE LINES, PUMPING STATION AND ALLIED WORKS  
BILL OF QUANTITIES  
SUMMARY OF COST**

<b>Bill No.</b>	<b>Description</b>	<b>Cost</b>
<b>2.0)</b>	<b>KOT MOMIN</b>	
2.1	COMMUNAL SEPTIC TANK	
2.2	BRICK DRAIN	
2.3	SEWERLINE	
2.4	SEPTIC TANK AND SOAKAGE PIT	
<b>TOTAL (SEWERAGE LINES, PUMPING STATION AND ALLIED WORKS)</b>		

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
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**COST ESTIMATE**

**BILL NO. 2.1 COMMUNAL SEPTIC TANK**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
<b>2nd BI-ANNUAL-2025 (01.07.2025 to 31.12.2025)</b>						
<b>SEPTIC TANK (CIVIL WORKS)</b>						
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling in layers around structure with excavated earth, watering and ramming lead 'upto one chain (30 m) and lift upto 5 ft. (1.5 m). <b>1) By Manual</b> ii) Ordinary soil	1000 Cft.	178.79		
2	10/3	Supplying and filling sand under floor; or plugging in wells.	100Cft	9.67		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): <b>(h) Ratio 1: 3: 6</b>	100 Cft.	36.42		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-  (a) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-  (1) Type A (nominal mix 1:1:2)	Cft.	19,176.35		

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**COST ESTIMATE**

**BILL NO. 2.1 COMMUNAL SEPTIC TANK**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
5	6/12	(c) Reinforced cement concrete in Pile cap, slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a-d) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- 1) Type A (nominal mix 1: 1: 2)	Cft.	8,256.30		
		Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	100 Kg	995.74		
6	19/47	Providing, fixing, testing and commissioning of $\mu$ -PVC (Unplasticized Polyvinyl Chloride Nikasi/SWV pipe, Dadex/Popular/Beta or approved equivalent manufacturer, plain/Bell Ended/Z-Joints conforming to BS4514/BS5255-EN1329 including the cost of specials and Solvents complete in all respects, as per drawings & specifications and/ or as approved and directed by the Engineer Incharge.				
			(iii) 50mm	P.Rft	352.00	
7	6/32	Providing and embedding 10" (250mm) wide PVC water stopper in expansion joints of RCC structures (Retaining walls, water tanks, Slabs) complete in all respect . ii) 10 mm thick	(v) 160 mm	P.Rft	1,848.00	
				Rft	2,163.70	

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**COST ESTIMATE**

**BILL NO. 2.1 COMMUNAL SEPTIC TANK**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
8	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead from approved nearby quarry	100Cft	97.23		
9	3/46	<b>Valve Chambers</b> Excavation of trenches in all kinds of soil, except cutting rock, for watersupply pipelines/electric cables upto 5 ft. (1.5 m) depth from ground level, including backfilling, trimming, dressing sides, leveling the beds of trenches to correct grade and cutting pits for joints, etc. complete in all respects.	1000 Cft	15.11		
10	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screenin and washing of stone aggregate): (h) Ratio 1: 3: 6 (f) Ratio 1: 2: 4	100 Cft 100 Cft	5.28 0.44		
11	7/7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3	100 Cft	39.75		
12	21/11	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	Each	132.00		
13	11/8	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick	100 Sft	26.40		

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**COST ESTIMATE**

**BILL NO. 2.1 COMMUNAL SEPTIC TANK**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
14	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (3) Type C (nominal mix 1: 2: 4)	Per Cft	1,545.09		
		(c) Reinforced cement concrete in Pile cap, slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a-d) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (3) Type C (nominal mix 1: 2: 4)	Per Cft	2,112.00		
15	6/12	Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust) (b) Deformed bars (ii)(Grade-60)	100 kg	116.15		

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**COST ESTIMATE**

**BILL NO. 2.1 COMMUNAL SEPTIC TANK**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
16	10/10	Brick on edge flooring, laid in 1:6 cement mortar, over a bed of ¾" (20 mm) thick cement mortar 1:6.	100 Sft.	7.04		
17	23/35	Providing and fixing sluice valve of B.S.S. quality and weight, Class `B', for cast iron pipe line, and Asbestos cement pipe line (including cost of jointing material):-  b) 4" i/d (100 mm)	No.	44.00		
18	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (crushed stone aggregate and bajri used in concrete items) (Lead from sargodha quarry)	100 Cft.	29.09		
19	N/S	Providing, transportation, fixing and Jointing of MS flanges to joint the valves (sluice vlave, air vlave and fire hydrant) with HDPE pipe line complete in all respect and as per approval of The Engineer.  2. 110 mm dia	Each	88.00		
20	NS	Providing and Fixing RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).	Per Set	80.00		
<b>A-Total Amount</b>						

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
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**TEHSIL KOT MOMIN, DISTRICT SARGODHA VILLAGES (Kot Fateh Khan, Burj Ghulam Rasool, Bagri, Sughrewala, Fattuwala, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**COST ESTIMATE**

**BILL NO. 2.1 COMMUNAL SEPTIC TANK**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
	<b>B</b>	<b>SOAKAGE PIT</b>				
1	22/1	Excavation of well in dry upto 20'(6 metre) below ground level, and disposal of soil within one chain (30 metre) <b>a) in ordinary soil or sand :-</b> i) from 0' to 5' (0 to 1.5 m) depth ii) from 5.1' to 10' (1.5 to 3.0 metre) depth	1000 Cft. 1000 Cft.	9.71 6.46		
2	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): <b>(h) Ratio 1: 3: 6</b>	100 Cft.	8.29		
3	7/7	Pacca brick work other than building upto 10ft. (3 m) height. 1:3	100Cft	18.47		
4	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	18.47		
5	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-  (a) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (1) Type A (nominal mix 1:1:2)	Cft.	480.39		

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**COST ESTIMATE**

**BILL NO. 2.1 COMMUNAL SEPTIC TANK**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
6	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and steel chairs, etc. complete in all respect. and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also Includes removal of rust from bars):- (c) Deformed bars (Grade-60)	100 Kg	17.44		
7	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead from approved nearby quarry	1000Cft	10.99		
8	10/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	3.97		
9	16/15	Supply and dumping at site, without boat, including handling of materials within three chains (90 m) b) shingle or spawl c) brick bats	100Cft. 100Cft.	0.20 15.86		
10	3/13	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel	1000Cft	15.75		
		Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) <b>Total Lead 2 KM</b> (Transportation will be paid as per actual lead chart to be approved by the Engineer)	1000Cft	0.41		

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**COST ESTIMATE**

**BILL NO. 2.1 COMMUNAL SEPTIC TANK**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
11	25/71	Providing and fixing barbed wire fencing on compound wall, consisting of 1½"x1½"x3/16" (40x40x5 mm), angle iron post 3¼ ft. (990 mm) long, 5 to 6 ft. (1500 to 1800 mm) centre to centre, embedded in cement concrete 1:4:8, base of size 9"x9"x12" (225x225x300 mm) and three rows of barbed wire, painting posts, etc. complete in all respects.	100Rft.	3.42		
12	NS	Providing and Fixing RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).	Per Set	2.00		
<b>B-Total Amount</b>						
<b>Grand Total</b>						

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Rasool, Bagri, Sughrewala, Fattuwalla, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan,  
Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak  
Suleman, Sewar)**

**BILL OF QUANTITIES**

**BILL NO. 2.2 BRICK DRAIN**

Sr. No	Ref	DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
		<b>MRS, 2nd BI-ANNUAL-2025</b>				
1	4/13	Dismantling brick work in lime or cement mortar.	100Cft.	834.54		
2	4/19	c) Dismantling cement concrete 1:2:4 plain.	100Cft.	213.94		
3	4/20	Dismantling cement concrete reinforced, separating reinforcement from concrete, cleaning and straightening the same.	100Cft.	142.63		
4	3/7	Earthwork excavation in open cutting for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-				
		1) Upto 5' (1.5 meter) depth	1000 Cft	407.84		
		2) From 5.01 ft. (1.5 m) to 10.0 ft. (3.0 m) depth	1000 Cft	40.78		
5	10/3	Supplying and filling sand under floor; or plugging in wells. (Provisional for road cuts to be decided by the competent authority)	100 Cft.	81.87		
6	3/24	Compaction of earthwork (soft, ordinary or hard soil) :-				
		a) Mixing, moistening earth to optimum moisture content in layers for compaction, etc. complete.	1000 Cft.	309.06		
		c) Ramming earthwork (all types of soil).	1000 Cft.	309.06		

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Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak  
Suleman, Sewar)**

**BILL OF QUANTITIES**

**BILL NO. 2.2 BRICK DRAIN**

Sr. No	Ref	DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
7	6/5(h)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (h) Ratio 1: 3: 6 (Lean Concrete)	100 Cft.	515.25		
8	6/5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4	100 Cft.	97.97		
9	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-  (a) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (2) Type B (nominal mix 1:1.5:3)	Per Cft	14840.54		

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Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak  
Suleman, Sewar)**

**BILL OF QUANTITIES**

**BILL NO. 2.2 BRICK DRAIN**

Sr. No	Ref	DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
10	6/12 (b)	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-  (ii) (Grade-60)	100 Kg	370.24		
11	7/7 (i)	Pacca brick work other than building upto 10ft. (3 m) height. 1:3	100Cft.	1669.09		
12	11/8	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick	100 Sft.	4450.90		
13	3/17	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) <b>Total Lead 2 KM</b> (Transportation will be paid as per actual lead chart to be approved by the Engineer)	1000 Cft	121.71		
14	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor (crushed stone aggregate and bajri used in concrete items) Lead From nearest quarry (Sargodha Quarry) (193km)	100 Cft.	681.16		
15	13/9 (i)	Bitumen coating to plastered or cement concrete surface:- i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft	2458.45		

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Suleman, Sewar)**

**BILL OF QUANTITIES**

**BILL NO. 2.2 BRICK DRAIN**

Sr. No	Ref	DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
16	19/47	Providing, fixing, testing and commissioning of $\mu$ -PVC (Unplasticized Polyvinyl Chloride ) Nikasi/ SWV pipe, Dadex / Popular / Beta or approved equivalent manufacturer, plain / Bell Ended / Z - Joints conforming to BS 4514 / BS 5255 - EN 1329 including the cost of specials and Solvents complete in all respects, as per drawings & specifications and / or as approved and directed by the Engineer Incharge.				
		(iii) 50mm	Per Rft	17099.56		
		(v) 110 mm	Per Rft	15832.80		
17	25/10	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, revitting, handling, assembling and fixing, but excluding erection in position. (screen)	100 Kg	9.22		
18	N/S	Providing & fixing of RPC slab manufactured with 100% recycled plastic composite material. 1.5 ft x 3 ft. 2 ft x 3 ft.	Nos	2366.75		
			Nos	3462.50		
<b>Total Amount</b>						-

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**BILL OF QUANTITIES**

**BILL NO 2.3 SEWER LINES**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
<b>A</b>		<b>2nd BI-ANNUAL-2025 (01.07.2025 to 31.12.2025) SEWER LINE</b>				
1	3/43	Earth work excavation in open cutting for water supply lines, sewers and manholes including backfilling, shuttering of wooden vertical planks, struts and beams, dressing to correct section and dimension according to templates and levels and removing surface water i/c back filling in all types of soil except shingle, gravel and rock, complete in all respect. If wooden planks, beams and struts are not used at site, the Composite Rates may be reduced by <b>1) By Manual</b> i) RS. 5,489.75 1000 Cft ii) RS. 6,418.75 1000 Cft i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth	1000 Cft.	173.77		
2	21/3	Providing and laying R.C.C pipe sewers,moulded with R.C.C 1:1.5:3 conforming to ASTM specifications C-76-79 (Latest version), class II,Wall B including carriage of pipes from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete. <b>a) Class-II</b> (i) 310 mm (12") i/d	Rft.	6,351.00		
		<b>b) Class-III</b> (i) 310 mm (12") i/d	Rft.	2,722.00		
3	3/25	Compaction of earthwork with power road roller (compaction equipment to be decided as per site condition after approval of the Engineer), including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: ii) 90% maximum modified AASHO dry density (backfilling)	1000 Cft.	16.51		

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**BILL OF QUANTITIES**

**BILL NO 2.3 SEWER LINES**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
4	21/22	Providing and laying sand under and around the sewer pipe, including leveling, manual compaction, complete in all respect. (Provisional Qty for filling under major road as per approval of the Engineer.)	100Cft.	21.64		
5	21/21	Providing and laying crushed stone aggregate of 1/4" to 1-1/2" guage under and around the sewer pipe, including leveling, manual compaction, complete in all respects.	100Cft	194.75		
6	3/17	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) (Transportation will be paid as per actual lead chart to be approved by the Engineer) a) upto ¼ mile (400 m).	1000 Cft.	55.03		
<b>MANHOLES and House Connection Chamber</b>						
7	3/43	Earth work excavation in open cutting for water supply lines, sewers and manholes including backfilling, shuttering of wooden vertical planks, struts and beams, dressing to correct section and dimension according to templates and levels and removing surface water i/c back filling in all types of soil except shingle, gravel and rock, complete in all respect. If wooden planks, beams and struts are not 1) By Manual i) RS. 5,489.75 1000 Cft ii) RS. 6,418.75 1000 Cft i) 0 ft. to 7.0 ft. depth	1000 Cft.	66.72		
8	21/21	Providing and laying crushed stone aggregate of 1/4" to 1" guage under and around the sewer pipe, including leveling, manual compaction, complete in all respects.	100Cft.	64.50		
9	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): nominal mix Ratio 1:3:6 nominal mix Ratio 1:2:4	100Cft 100Cft	45.52 23.87		

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**BILL OF QUANTITIES**

**BILL NO 2.3 SEWER LINES**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
10	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, ncluding forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in posi tion, etc.)  (a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
	0.84	(2) Type B (nominal mix 1: 1½: 3)	Per Cft	918.75		
11	6/12 (c)	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	100Kg	25.00		
12	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor (crushed stone aggregate and bajri used in concrete items) Lead From Approved Query)	100 Cft.	242.00		
13	7/7	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:3	100Cft.	135.83		
14	7/10	Extra for pacca brick work in steining of wells or any other circular masonry..	100Cft.	98.70		
15	11/16	Cement pointing flush upto 20' (6.00m) height:- a) ratio 1:2	100 Sft.	110.83		
16	11/8	Cement plaster 1:3 upto 20' (6.0 m) ht:				

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**BILL OF QUANTITIES**

**BILL NO 2.3 SEWER LINES**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
17	21/6	b) 1/2"(13mm) thick Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	100 Sft.	237.89		
			Each	22.00		
18	19/47	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized Polyvinyl Chloride Nikasi/SWV pipe, Dadex/Popular/Beta or approved equivalent manufacturer, plain/Bell Ended/Z-Joints conforming to BS4514/BS5255-EN1329 including the cost of specials and Solvents complete in all respects, as per drawings & specifications and/ or as approved and directed by the Engineer Incharge. (v) 4"(110 mm)	Rft.	3,820.00		
19	21/11	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	Each	618.00		
20	13/9	Bitumen coating to plastered or cement concrete surface: - i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	100 Sft.	237.89		
21	21/7	Extra for making and finishing benching floor work in manholes chambers with 1/8(3mm) thick cement	100 Sft.	18.35		
22	25/10+1 1	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, rebitting, handling, assembling and fixing, but including erection in position. (For Grating)	100 Kg	7.13		
23	3/17	Transportation of earth all types when the total distance, including the lead covered in the item of work, is more than 1000 ft. (300 m) (Transportation will be paid as per actual lead chart to be approved by the Engineer) a) upto ¼ mile (400 m).	1000 Cft.	15.10		
<b>Sub Total (A)</b>						

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**BILL OF QUANTITIES**

**BILL NO 2.3 SEWER LINES**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
<b>B</b>		<b>NON MRS ITEMS</b>				
1	NS	Providing and Fixing RPC Manhole Cover Manufactured with 100% Recycled Plastic Composite Material, 650 mm (26"dia) with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (31.1") with average breaking load capacity of 10 Ton and weight including frame of 50 kg (Minimum).	Per Set	146.00		
					<b>Sub Total (B)</b>	
					<b>Grand Total</b>	

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**BILL OF QUANTITIES**

**BILL NO. 2.4 SEPTIC TANK AND SOAKAGE PIT**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
		<b>2nd BI-ANNUAL-2025 (01.07.2025 to 31.12.2025) SEPTIC TANK (CIVIL WORKS)</b>				
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling in layers around structure with excavated earth, watering and ramming lead 'upto one chain (30 m) and lift upto 5 ft. (1.5 m). <b>1) By Manual</b> ii) Ordinary soil	1000 Cft.	17.60		
2	10/3	Supplying and filling sand under floor; or plugging in wells.	100Cft	3.20		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): <b>(h) Ratio 1: 3: 6</b>	100 Cft.	4.84		
4	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-  (a) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-  (1) Type A (nominal mix 1:1:2)	Cft.	410.80		

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**BILL OF QUANTITIES**

**BILL NO. 2.4 SEPTIC TANK AND SOAKAGE PIT**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
5	6/12	(c) Reinforced cement concrete in Pile cap, slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a-d) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- 1) Type A (nominal mix 1: 1: 2)	Cft.	952.00		
		Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	100 Kg	49.47		
6	7/7	Pacca brick work other than building upto 10ft. (3 m) height. 1:3	100Cft	28.05		
7	11/8	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick	100 Sft.	60.80		
8	19/47	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized Polyvinyl Chloride Nikasi/SWV pipe, Dadex/Popular/Beta or approved equivalent manufacturer, plain/Bell Ended/Z-Joints conforming to BS4514/BS5255-EN1329 including the cost of specials and Solvents complete in all respects, as per drawings & specifications and/ or as approved and directed by the Engineer Incharge.				
9	23/17	(iii) 50mm	P.Rft	320.00		
		(v) 110 mm	P.Rft	1,680.00		
		Shrouding with graded pea gravel 3/8" to 1/8" (10 to 3 mm), around tubewell in bore hole.	Per Cft	250.00		

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
CLUSTER NORTH  
PUNJAB RURAL SUSTAINABLE WATER SUPPLY AND SANITATION PROJECT**

**TEHSIL KOT MOMIN, DISTRICT SARGODHA VILLAGES (Kot Fateh Khan, Burj Ghulam Rasool, Bagri, Sughrewala, Fattuwalla, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**BILL OF QUANTITIES**

**BILL NO. 2.4 SEPTIC TANK AND SOAKAGE PIT**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
10	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead from approved nearby quarry	1000Cft	11.80		
<b>A-Total Amount</b>						
	<b>B</b>	<b>SOAKAGE PIT</b>				
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling in layers around structure with excavated earth, watering and ramming lead 'upto one chain (30 m) and lift upto 5 ft. (1.5 m). <b>1) By Manual</b> ii) Ordinary soil	1000 Cft.	14.52		
2	10/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	4.00		
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): <b>(h) Ratio 1: 3: 6</b>	100 Cft.	6.40		
4	7/7	Pacca brick work other than building upto 10ft. (3 m) height. 1:3	100Cft	32.40		

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**BILL OF QUANTITIES**

**BILL NO. 2.4 SEPTIC TANK AND SOAKAGE PIT**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
5	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using Ordinary Portland Cement / Sulphate resisting cement / Slag cement as may be required; coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:-				
		(1) Type A (nominal mix 1:1:2)	Cft.	586.80		
6	6/12	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and steel chairs, etc. complete in all respect. and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also Includes removal of rust from bars):-				
		('c) Deformed bars (Grade-60)	100 Kg	18.64		
7	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. Lead from approved nearby quarry				
			1000Cft	10.00		

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**BILL OF QUANTITIES**

**BILL NO. 2.4 SEPTIC TANK AND SOAKAGE PIT**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
8	23/17	Shrouding with graded pea gravel 3/8" to 1/8" (10 to 3 mm), around tubewell in bore hole.	Per Cft	1,600.00		
<b>B-Total Amount</b>						
<b>Grand Total</b>						



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TEHSIL KOT MOMIN, DISTRICT SARGODHA VILLAGES (Kot Fateh Khan, Burj Ghulam Rasool,  
Bagri, Sughrewala, Fattuwala, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd,  
Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**ROAD RESTORATION  
BILL OF QUANTITIES  
SUMMARY OF COST**

<b>Bill No.</b>	<b>Description</b>	<b>Cost</b>
3.0) 3.1	<b>KOT MOMIN</b> ROAD RESTORATION	
<b>TOTAL (SEWERAGE LINES, PUMPING STATION AND ALLIED WORKS)</b>		

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
CLUSTER NORTH  
PUNJAB RURAL SUSTAINABLE WATER SUPPLY AND SANITATION PROJECT**

**TEHSIL KOT MOMIN, DISTRICT SARGODHA VILLAGES (Kot Fateh Khan, Burj Ghulam Rasool, Bagri, Sughrewala, Fattuwalla, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**BILL OF QUANTITIES**

**BILL NO. 3.1.1 Road Restoration**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
<b>MRS, 2nd BI-ANNUAL-2025 (01.07.2025 to 31.12.2025)</b>						
<b>CIVIL WORKS</b>						
1	4/45	Dismantling and removing road metalling.	100Cft.	335.51		
2	4/46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).	100Cft.	1,118.36		
3	4/29	Dismantling brick or flagged flooring without concrete foundation.	100Sft.	2,532.00		
4	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4	100Cft	59.05		
5	18/20	Providing and laying dry brick pavement/soling in streets or roads, etc. sand grouted, laid in proper camber, including preparation, watering, compaction of bed to proper camber, and sand cushion.	100Cft	865.03		
6	21/8	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling.	100Sft.	2,775.02		
7	10/43	Providing and laying Tuff Pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope . complete in all respect. (50% Grey / 50% Coloured) b) 60-mm thick	Per Sft	117,109.32		
8	18/3	a) Providing and laying sub-base course of stone product of approved quality and grade, including placing, mixing, spreading and compaction of sub-base material to required depth, camber, grade to achieve 100% maximum modified AASHO dry density, including carriage of all material to site of work except gravel and aggregate.  ii) Crushed stone aggregate	100Cft.	1,815.69		

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**BILL OF QUANTITIES**

**BILL NO. 3.1.1 Road Restoration**

SR. NO.	Ref	DESCRIPTION	UNIT	QUANTITY	UNIT RATE	AMOUNT
					(Rs)	(Rs)
9	21/10	Restoration of metalled road, on laid service line, including compaction:- a) Carpetted road, with 2" (50 mm) carpet and 10" (250 mm) depth of stone metal for sub-base and base. c) Black Topped Road with two coats of surfacing & 10" (250 mm) depth of stone metal, for sub base & base.	100Sft.	494.25		
			100Sft.	741.38		
10	3/1	Earthwork excavation undressed lead upto a single throw of Kassi, phaorah or shovel:- ii) In ordinary soil.	1000 Cft.	280.91		
11	14/1	Dressing and levelling of earhtwork to designed section, etc. complete:- b) Ordinary or hard soil.	100Sft.	3,095.47		
12	3/17	Transportation of earth all types when the total distance, including the lead covered in the i tem of work, is more than 1000 ft. (300 m) <b>Total Lead 1 KM</b> (Transportation will be paid as per actual lead chart to be approved by the Engineer)	1000Cft	280.91		
13	1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl , kankar lime (unslaked), surkhi , etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor (crushed stone aggregate and bajri used in concrete items) Lead From nearest quarry (Sargodha Quarry) (193km)	100 Cft.	51.97		
<b>Total Amount</b>						



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**BILL OF QUANTITIES**

**Bill 4: ESMP (ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN)**

Sr. No.	Ref	Description	Unit	Quantity	Rate (PKR)	Amount (PKR)
	<b>A</b>	<b>Personal Protective Equipments</b>				
1	NS	<b>Safety Jackets</b> EN ISO 201171: 360 degree visibility Fluorescent yellow/orange:retro reflective strips: breathable mesh fabric: secure Velcro or zipper closure. provided in appropriatc sizes are required by Staff.	Each	480		
2	NS	<b>Safely Hehnels</b> EN-397: High-density polyethylene (HDPE) or ABS plastic: adjustable screw harness: Adjustable headbands, chin straps. and non-allergic sweatbands. color-coded (white for engineers. yellow for workers)	Each	480		
3	NS	<b>Safety Gloves</b> EN 388: Nitrilc-coated or leather palm; abrasion and cut- resistant; breathable back; conforms to EN388 safety ratings	Each	800		
4	NS	<b>Dust Mnsk (Dust proofmask)</b> ISO 16975: Disposable N95 or FFP2 class mask: elastic bonds: nose clip for sealing: replace after use	Each	1600		
5	NS	<b>Safety Shoes &amp; Toes</b> EN ISO 20345. requiring a toe cap to withstand a minimum 200-joule impact and 15 kilonewtons (kN) of compression Steel toe cap; anti-slip, oil-resistant sole; leather upper; ankle support for shoes only	Each	560		
6	NS	<b>Safety Harness Belt</b> ISO 10333: High-tenacity polyester webbing, minimum width 45mm; adjustable shoulder and thigh straps with metal buckles; dorsal D-ring for fall arrest. side D-rings for position.fog; ond chest strap with quick-connect buckle; Renowned Brand	Each	48		
7	NS	<b>Protective Goggles</b> ISO 16321: Anti-fog, scratch-resistant: side shielding for wrap-around protection: adjustable strap	Each	160		
8	NS	<b>Ear Plugs</b> ISO 4869-1: Soft polyurethane foam: noise reduction rating (NRR) of 30 dB or more	Each	320		



**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
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Sughrewala, Fattuwalla, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd, Chani Dal,  
Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**BILL OF QUANTITIES**

**6. Employer Facilities**

<b>Sr. No.</b>	<b>Ref. MRS</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Rate (Rs)</b>	<b>Amount (Rs)</b>
1		Providing and maintaining site offices (portable air condition (1,5 ton AC) cabin containers lined with win board size 20'x8'x8.5' with toilet & kitchen, all-time availability of water and electricity) for the entire duration of the project to the Employer and the Engineer. It includes office tables, chairs, water dispenser, electric heater, steel almirah for document storage, etc complete with all respect. After completion of the project these containers and all accessories will be the property of PRMSC	Nos	1.0		
2		Providing 02 Nos office boy in accordance with the special provisions of the bidding document and up to the satisfaction of the Employer/Engineer.	Per month	20.0		
3		Providing and maintaining the Cost of Utility Services (Electricity, Water, Gas, etc.) for the 01 No. office.	Per month	20.0		
<b>Total Amount</b>						

**ENGINEERING DESIGN AND CONSTRUCTION SUPERVISION  
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PUNJAB RURAL SUSTAINABLE WATER SUPPLY AND SANITATION PROJECT**

**TEHSIL KOT MOMIN, DISTRICT SARGODHA VILLAGES (Kot Fateh Khan, Burj Ghulam Rasool, Bagri, Sughrewala, Fattuwalla, Thathi Kalan, Thathi Khurd, Kot Ghazi Kalan, Kot Ghazi Khurd, Chani Dal, Thatha Bhairan, Dullewala, Mumrana, Kot Kala, Chak Suleman, Sewar)**

**BILL OF QUANTITIES**

**Bill 4: ESMP (ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN)**

Sr. No.	Ref	Description	Unit	Quantity	Rate (PKR)	Amount (PKR)
	<b>B</b>	<b>Health Safety Environment Materials / Testing</b>				
9	NS	<b>First Aid Kit</b> ISO 7010-E003: Painkiller, eyewash solution. antibiotic ointment. thermometer, plasters, sterile gauze, dressings. sterile eye dressings, triangular bandages. crepe rolled bandages, safety pins, disposable sterile gloves and tweezers), pain killers, burn creams, pyodine solution (big bottle), other medication as required by tehsil team is adequate size and quantity	Each	16		
10	NS	<b>Warning/ Safety Signs</b> ISO 7010: Weatherproof PVC or Plastic or aluminum signs: reflective print: standardized colors and pictograms (danger, caution, mandatory)	Each	400		
11	NS	<b>Green Mesh</b> Green safety netting for site periphery: 50% shading: UV-stabilized HDPE material.	Sft	3200		
12	NS	<b>DCP Fire Extinguisher (Dry Chemical Powder)</b> ISO 7165: 6.kg; ABC type; The extinguishing agent is mono ammonium phosphate and ammonium sulphate powder and the discharge time of the agent is 13 second	No.	16		
13	NS	<b>CO2 Fire Extinguisher</b> ISO 7165: 5 kg: frost-free horn: suitable for electrical and liquid fires: discharge time of the agent in 13 second	No.	16		
14	NS	<b>Fire Alarm</b> ICS 13.030.10: Proper segregation. PPE for handlers, timely removal, record keeping per solid waste rules	No.	32		
15	NS	<b>Trapuline</b> Water proof trapuline sheet made from polyethylene or canva	Sft	480		

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**BILL OF QUANTITIES**

**Bill 4: ESMP (ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN)**

Sr. No.	Ref	Description	Unit	Quantity	Rate (PKR)	Amount (PKR)
16	NS	<b>Safety Cones</b> UV-resistant PVC or rubber material: at least 28 to 36 inches in height: high-visibility orange color with reflective collars (minimum 4-inch reflective band) for day and night visibility	Each	192		
17	NS	<b>Tree Plantation</b> 5-6 feet height: Native species plantation: soil preparation and watering included	No.	1600		
18	NS	<b>Barricading/ Fencing ( Reflective tape, poles, safety mesh/netting)</b> ISO 13857: include poles, reflecting tapes, plastic mesh netting; minimum 3 feet height; durable and visible	Rft	4800		
19	NS	<b>Trainings</b> HSE Training, Rescue Training. Labour Code of Conduct, Environmental Code of Conduct, Defensive Driver Trainings, Labour Laws and Labour Rights, GAP Training, C-ESMP Training. and anyother as required by E&S wing	Quaterly	64		
20	NS	<b>Water Sprinkling</b> Water sprinkling through tank mounted on tractor	Per Trip	480		
21	NS	<b>Medical Screening for Workers</b> CBC, Anti HCV, HBsAG, HIV, RPR, LFTs, RFTs etc.	Persons	480		
		<b>C Environmental Testing and Monitoring</b>				
22	NS	<b>Ambient Air Quality</b> As per the parameters and methodology defined by EPA (Quarterly in every village)	Each	48		
23	NS	<b>Groundwater Quality Test</b> As per the parameters and methodology defined by EPA (Quarterly in every village)	Each	48		
24	NS	<b>Surface Water Quality Test</b> As per the parameters and methodology defined by EPA (Quarterly in every village)	Each	48		
25	NS	<b>Waste Water Quality Test</b> As per the parameters and methodology defined by EPA (Quarterly in every village)	Each	48		

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**BILL OF QUANTITIES**

**Bill 4: ESMP (ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN)**

Sr. No.	Ref	Description	Unit	Quantity	Rate (PKR)	Amount (PKR)
26	NS	<b>Noise Level Monitoring</b> As per the parameters and methodology defined by EPA (Quarterly in every village)	Each	48		
	D	<b>Site Specific / Contractors Environmental and Social Management Plan</b>				
27	NS	<b>CESMP Formulation</b> By an individual or firm as approved by PRMSC Environment Wing	Per Village	16		
	E	<b>HSE Staff</b>				
28	NS	<b>HSE Supervisor</b> Bachelor's degree in Environmental Sciences / Engineering. NEBOSH or IOSH certification will be preferred, with over one year of experience in Occupational Health and Safety. one HSE person for 10-15 village, hiring of HSE staff will be approved by E&S prior to contract signing	Per Month Village	192		
	E	<b>Waste Management and House Keeping</b>				
29	NS	<b>Handling and disposal of Hazardous Material</b> ICS 13.030.30: Safe storage, labeling, and transportation. spill kits and secondary containment as per MSDS	3 times per village for duration of contract	48		
30	NS	<b>Handling and disposal of Solid Waste Material</b> ICS 13.030.10: Proper segregation, PPE for handlers, timely removal, recordkeeping per solid waste rules	3 times per village for duration of contract	48		
<b>Total Amount</b>						