

**RATES FOR
IRRIGATION WORKS**

6.1. GENERAL SPECIFICATIONS FOR IRRIGATION WORKS

- Specification for Irrigation & Land Drainage – Published on January 2017
CIDA Publication No: CIDA/SP/102
- Specification for Building Works (Volume I) – [3rd Edition (Revised) – July 2004]
ICTAD Publication No: SCA/4/1
- Specification for Electrical & Mechanical Works - [2nd Edition (Revised) – August 2000]
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- Rates included all taxes other than VAT. VAT to be paid separately.

6.2 NORMS FOR CLEARING AND EARTH WORK			
No	Description	Unit	Qty
	CLEARING - MANUAL		
1	Clearing and grubbing light jungle clearing	L.Day / Ha	74
2	Shrub & thorny jungle clearing	L.Day / Ha	49
3	Secondary growth jungle clearing	L.Day / Ha	37
4	Weeding	L.Day / m ²	0.004
5	Stripping top soil	L.Day / m ³	0.785
6	Scarifying top soil	L.Day / m ²	0.02
	CLEARING - MACHINERY		
7	Clearing and grubbing light jungle	Ha / Day	1.619
	Burning to asses	L.Day / Ha	2
8	Shrub & thorny jungle clearing	Ha / Day	2.429
	Burning to asses	L.Day / Ha	2
9	Medium jungle clearing	Ha / Day	1.214
	Burning to asses	L.Day / Ha	2
10	Common jungle clearing	Ha / Day	1.416
	Burning to asses	L.Day / Ha	2
11	Heavy jungle clearing	Ha / Day	1.335
	Burning to asses	L.Day / Ha	2
12	Stripping top soil along the upstream slope, downstream slope and top of the bund to a thickness of 0.075 meters in order to receive new earth by machinery and spoils to be disposed outside the reservation as directed		
	Stripping by Dozer	m ³ /day	1,471.6
	Loading by Back-hoe	m ³ /day	1,279.16
	EARTH WORK - MANUAL		
13	Earth Excavation in foundation and back filling / spoil to waste / dump including watering and compaction	L.Day / m ³	1.04
14	Borrowing earth from identified borrow areas including transport and placing in tank bund to the design profile in 225 mm layers including watering and compacting		
	Borrow Earth cut and lift 5' haul 200'	L.Day / m ³	0.883
	Placing and compaction in tank bund including picking roots and spreading	L.Day / m ³	0.213
	Watering on tank bund for compaction	L.Day / m ³	0.01
	Less haul 200ft (0.196 L.day per 100 ft)	L.Day / m ³	0.392
15	Earth Excavation from borrow and forming canal bund including watering and compacting		
	Borrow Earth cut and lift 5' haul 200'	L.Day / m ³	0.883
	Placing and compaction in canal bund including picking roots and spreading	L.Day / m ³	0.213
	Watering on canal bund for compaction	L.Day / m ³	0.01
	Less haul 200ft (0.196 L.day per 100 ft)	L.Day / m ³	0.392

No	Description	Unit	Qty
16	Earth Cutting in canal and forming canal bund including watering and compacting		
	Borrow Earth cut and lift 5' haul 200'	L.Day / m ³	0.883
	Placing and compaction in canal bund	L.Day / m ³	0.213
	Watering on canal bund for compaction	L.Day / m ³	0.01
	Less haul 100ft	L.Day / m ³	0.196
17	Desilting in canal and spoil to waste as directed		
	Desilt manual	m ³ /Day	1.415
	EARTH WORK - MACHINERY		
18	Borrowing earth from identified borrow areas including transport, benching, placing in layers average thickness not more than 225mm as earth filling in existing bund embankment and picking roots, watering as directed, compacting by vibrating compactor		
	Borrow Earth - Dozing by Dozer	m ³ /Day	633.92
	Loading by Back-hoe	m ³ /Day	289.23
	Spreading by dozer - 100 ft	m ³ /Day	3,090.36
	Picking roots by manual	L.Day / m ³	0.024
	Watering on tank bund for compaction by Bowser	m ³ /Day	142
	Compaction in tank bund by Sheep Foot roller	m ³ /Day	1,881.4
19	Earth Excavation from borrow and forming Canal bund including Compaction by Machinery and shaping by manual		
	Borrow Earth by Excavator	m ³ /Day	289.23
	Shaping by manual	m ³ /Day	100
	Compacting by Back - hoe	m ³ /Day	300
20	Earth Cutting in canal or canal reservation and forming Canal bund including Compaction by Machinery and shaping by manual		
	Earth cutting by Back - hoe	m ³ /Day	289.23
	Shaping by manual	m ³ /Day	100
	Compacting by Back - hoe	m ³ /Day	300
21	Earth cutting in canal and spoil to waste as directed		
	Earth cutting by Excavator	m ³ /Day	289.23
22	Earth deduction along spill tail canal and spoil to deposit		
	Earth - Dozing by Dozer	m ³ /Day	633.92
	Loading by Back-hoe	m ³ /Day	289.23
23	Earth deduction along spill tail canal and level / heap		
	Earth - Dozing by Dozer	m ³ /Day	633.92

No	Description	Unit	Qty
24	Earth Excavation from borrow and forming canal bund by manual Transport by tractor (Earth cutting by machinery)		
	Earth cutting by Excavator	m ³ /Day	289.23
	Placing and compaction in tank bund by manual	L.Day / m ³	0.213
	Watering on tank bund for compaction by manual	L.Day / m ³	0.01
25	Cut open the bund and Spoil to waste by machinery		
	Cut open by Excavator	m ³ /Day	289.23
26	Cut open the bund by Machinery and filling by manual		
	Cut open by Excavator	m ³ /Day	289.23
	Refilling haul manual 100'	L.Day / m ³	0.196
	Placing and compaction in tank bund manual	L.Day / m ³	0.213
	Watering on tank bund for compaction manual	L.Day / m ³	0.01
27	Cut open the bund and refilling including watering and compaction by machinery		
	Cut open by Excavator	m ³ /Day	289.23
	Refilling by Back-hoe	m ³ /Day	904
	Spreading manual	L.Day / m ³	0.09
	Watering on tank bund for compaction by bowser	m ³ /Day	142
	Compaction in tank bund by sheep foot roller	m ³ /Day	141.5
	GRAVEL WORK		
28	Furnishing, transporting, placing and spreading of gravel on the bund including watering and compaction by manual		
	Gravel cut and lift 5' haul 200'	L.Day / m ³	1.04
	Placing and compaction in tank bund including picking roots and spreading	L.Day / m ³	0.213
	Watering on tank bund for compaction	L.Day / m ³	0.01
	Less haul 50'	L.Day / m ³	0.196
29	Furnishing, transporting, placing and spreading of gravel on the bund including watering and compaction by machinery		
	Gravel Cutting by Back-hoe	m ³ /Day	245.36
	Spreading by dozer - 100'	m ³ /Day	2,988.5
	Watering on tank bund for compaction by bowser	m ³ /Day	142
	Compaction in tank bund by Sheep Foot Roller	m ³ /Day	1,881.4
30	Furnishing and placing 0.15m thick gravel bedding for placement of Rip rap as directed		
	Spreading by dozer - 100 '	m ³ /Day	2,988.5
	Compaction in tank bund by Dozer	m ³ /Day	664.107

No	Description	Unit	Qty
	ROAD WAY		
31	Trimming and comparing road way by machinery		
	Data for 1025 sq.m. for a 200mm thick layer		
	Volume of soil in the area	cu.m(VankVol)	205
	Grader blade efficiency	%	85
	Time for 4 passes in 1025 sq.m area	Hours	1.5
	Hire charges 120 - 140 hp motor grader	Hours	1.5
	Cost of banks men s/sk	Hours	1.5
32	Earth Excavation from borrow and forming Road way		
	Borrow Earth Dozing by Dozer	m ³ /Day	633.92
	Loading by Back-hoe	m ³ /Day	289.23
	Spreading by Dozer - 100'	m ³ /Day	2,988.5
	Picking roots Manual	L.Day / m ³	0.024
	Watering on tank bund for compaction by Bowser	m ³ /Day	142
	Compaction in road way by Vibrating roller	m ³ /Day	2,822.1
33	Furnishing, transporting, placing and spreading of gravel on the road way including watering and compaction		
	Gravel Cutting by Back-hoe	m ³ /Day	245.36
	Spreading by Dozer - 100'	m ³ /Day	1,992.32
	Watering on tank bund for compaction	m ³ /Day	142
	Compaction in road way by Vibrating roller	m ³ /Day	1,881.4
34	Supplying turf sods to site, preparation and dressing of surface, firmly placing and full turfing to new fill and watering and kept moist till grass root up as directed by the Engineer.		
	Cutting and planting turf in slopes	L.Day / m ²	0.072
	L.days for watering	L.Day / m ²	0.0011
	Water for turf	l	12.474
	Loading / unloading	L.Day / m ²	0.0269

6.3 NORMS FOR CONCRETE AND OTHERS			
No	Description	Unit	Quantity
1	Reinforcement		
	Material including 25% for waste & lap of unit rate for 1kg Tor steel reinforcement	kg	1.25
	2% Cost of Tor steel for bindings wire		
	1% Cost of Tor Steel for cover blocks		
	Skilled Labour	L.Day	0.01
	Unskilled Labour	L.Day	0.03
2	Formwork in Timber		
	Plywood	Sq	1.15
	25 % cost of Planks for struts and battens		
	Assorted wire nails	kg	7
	5 % cost of Planks for deboning materials		
	Skilled for making for 6 uses	L.Day	0.5
	Unskilled for making for 6 uses	L.Day	0.5
	Unskilled for fixing and removing	L.Day	1
3	6''-9'' Random Rubble Masonry		
	Cement	bags	2
	Rubble	m ³	1.37
	Sand	m ³	0.34
	Water	lit	58.83
	Mason	L.Day	0.26
	Labourer	L.Day	1.77
4	6''-9'' Random Rubble Pitching - Thickness 9''		
	Cement	bags	0.45
	Rubble	m ³	0.33
	Sand	m ³	0.08
	Water	lit	14.24
	Mason	L.Day	0.054
	Labourer	L.Day	0.38
5	300-450mm Removing Rip Rap		
	Labourer Removing existing rip rap	L.Day	0.21
6	300-450mm Removing and Repacking Rip Rap		
	Labourer Removing existing rip rap	L.Day	0.21
	Labourer Repacking rip rap	L.Day	0.21
7	Supplying & Dumping Rip Rap 300 - 450mm		
	Rubble 300 - 450mm	m ³	1.05
8	Placing & Packing Rip rap (Manual)		
	Labourer for placing & packing rip rap	L.Day	0.23

6.4. NORMS FOR GATES

No.	Size of gate		For fixing gate		Loading (by team of 2 unskilled workmen per hour)	Unloading (by team of 2 unskilled workmen per hour)
			Skilled Labour	Unskilled Labour		
1	6" dia	150mm dia	0.4	1.4	8	8
2	9" dia	225mm dia	0.4	1.4	8	8
3	12" dia	300mm dia	0.5	1.5	4	4
4	15" dia	380mm dia	0.5	1.5	4	4
5	18" dia	450mm dia	0.75	2.75	4	4
6	24" dia	600mm dia	1	5	2	2
7	30" dia	750mm dia	1.5	7	2	2
8	36" dia	900mm dia	1.5	7	1	1

6.5 NORMS FOR HUME PIPES FOR L.FT

No.	Size of Hume pipe		For Laying & Jointing		Loading (by team of 2 unskilled workmen per hour)	Unloading (by team of 2 unskilled workmen per hour)	Joint materials
			Skilled Labour	Unskilled Labour			
1	4" dia	100mm dia	0.5/60	2/60	36ft	36ft	1½ % cost of pipe
2	6" dia	150mm dia	0.5/60	2/60	36ft	36ft	
3	9" dia	225mm dia	0.5/42	2/42	36ft	36ft	
4	12" dia	300mm dia	0.5/24	2/24	36ft	36ft	
5	15" dia	380mm dia	0.5/24	2/24	36ft	36ft	
6	18" dia	450mm dia	1/30	4/30	16ft	16ft	
7	24" dia	600mm dia	1/24	4/24	16ft	16ft	
8	30" dia	750mm dia	1/18	4/18	8ft	8ft	
9	36" dia	900mm dia	1/18	6/18	8ft	8ft	
10	48" dia	1200mm dia	1/12	6/12	4ft	4ft	

6.6 NORMS FOR MISCELLANEOUS WORKS			
No	Description	Unit	Quantity
1	Supplying and fixing of 12mm Ø 0.45m long Mild steel Dowel		
	Weight of Steel	kg	0.4
	Skilled Labour	L.Day	0.1
	Unskilled Labour	L.Day	0.1
2	Supplying and Fixing of 16mm Ø 0.45m long Mild steel Dowel		
	Weight of Steel	kg	0.71
	Skilled Labour	L.Day	0.125
	Unskilled Labour	L.Day	0.125
3	Furnishing and fixing 50 x 100mm R.C.C. hand rails with 2 Nos. 10mm Ø reinforcement including form work		
	1:2:4 (20 mm) ct. concrete per L/m	m ³	0.005
	Formwork	m ²	0.3
	Fixing Skilled Labour	L.Day	0.166
	Fixing Unskilled Labour	L.Day	0.166
	Reinforcement	kg	1.234
4	Guard Stones		
	12 mm Tor steel	kg	3.2
	1:2:4(20mm) ct. con	m ³	0.026
	Form work	m ²	0.393
5	Forming of Sand in Pohora Bags.		
	Unskilled Labour	L.Day	0.033
6	Stitching of Sand Bags.		
	Unskilled Labour	L.Day	0.005
7	Laying of Sand Bags.		
	Unskilled Labour	L.Day	0.025
8	Removing of Sand Bags.		
	Unskilled Labour	L.Day	0.025
9	Rate Analysis for fabricating and installation of 1350mm x 750m size steel paneled gate		
	50mm x50mm x6mm L angle	m	7.05
	6mm thick steel plate	m ²	1.013
	37.5mm Dia spindle bar	m	2.25
	Thread cutting charges	ft	3.445
	37.5mm Dia GI housing, base plate & locking arrangement with full set	No	1
	Brass nut	No	1
	150mm x75mm size channel iron	m	1.65
	Rag bolt 3/4" x 9"	Nos	2
	Operating handle	No	1

No	Description	Unit	Quantity
10	Water Level Measuring Gauge		
	Supplying and fixing 0.15m x 13.72m Stainless steel plat in approved colour printing of water level measuring gauge		
	16 gauge stainless steel plat (including wastage)	m ²	2.97
	Colour print	m ²	2.97
	Stainless scrow	Nos	64
	Skill labour	L.day	2
	Painter	L.day	2
	Welder	L.day	2
	Labour	L.day	6
11	Furnishing, & Packing 225 x 150 mm random rubble in to Gabion boxes		
	Rubble	Cube	1.44
	Unskilled Labour	L.Day	4.25
	Skilled	L.Day	0.85
12	Furnishing, & Laying Polyfelt Geosynthetics sheet 1.5mmthk. for gabion boxes		
	Unskilled Labour	L.Day	0.05
13	Furnishing, & Laying Polyfelt Geosynthetics 2.5mmthk. sheet for gabion boxes		
	Unskilled Labour	L.Day	0.05
14	Expansion joints in concrete		
	Bitumen	Lit	22.5
	River sand	Cube	5
	Skill Labour	L.day	2.5
	Unskill Labour	L.day	2.5

6.7 NORMS FOR GABION BOX		
No	Size	Lacing & Placing or 1 No Gabion Box/ L Day
1	1.0 x 0.5 x 0.5	0.167
2	1.0 x 1.0 x 1.0	0.292
3	1.5 x 1.0 x 1.0	0.313
4	2.0 x 1.0 x 1.0	0.333
5	2.0 x 1.0 x 0.5	0.250
6	3.0 x 1.0 x 1.0	0.375
7	3.0 x 1.0 x 0.5	0.292

6.8 NORMS FOR AGRICULTURE WELLS

Rate adjustment for Agriculture Wells

Depth in ft	Plastering	Block Work	Rubble Masonary
0 - 05	add 0.25 L.Days	add 0.25 L.Days	add 0.25 L.Days
05 - 10	add 0.5 L.Days	add 0.5 L.Days	add 0.5 L.Days
10 - 15	add 0.75 L.Days	add 0.75 L.Days	add 0.75 L.Days
15 - 20	add 1 L.Days	add 1 L.Days	add 1 L.Days

Earth Excavation

Lift in ft	Production of 8 hrs Excavator in m ³		Shaping by manual (m ³ per day)	Spreading by dozer - 100 ft (m ³ per day)
	Cutting	Lifting		
0 - 5	144.613	289.23	100	2988.48
5 - 10	141.783	283.57		
10 - 15	138.387	276.77		
15 - 20	135.274	270.55		

No	Description	Unit	Quantity
	16mm thick cement and sand 1:3 Plastering		
	Cement	Cube	1.47
	River sand	Cube	0.06
	Skill Labour	L.day	0.75
	Unskill Labour	L.day	1.50
	Cement Concrete block in 1:4:5(20mm) Masonry 1:5 Cement and Sand		
	Block Casting: Cement	Cwt	11.25
	River Sand	Cube	0.60
	¾" Metal	Cube	1.00
	Skill Labour	L.day	4.5
	Unskill Labour	L.day	9.00
	Basket		0.66
	Masonry work: Cement	Cwt	2.5
	River Sand	Cube	0.25
	Skill Labour	L.day	2.50
	Unskill Labour	L.day	4.00
	Basket		0.33

* Rate to be added for every 5' depth as 5%, 7%, 10%, 13%, 16%.

6.10 RATES FOR IRRIGATION WORKS						2022	
No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
6.10.1 CLEARING WORKS - MANUAL							
1	Light jungle clearing along the tank bund / Canal / Spill tail canal /road way and reservations including uprooting stumps removing outside and burning to ashes as directed.	ha				162,800.00	162,800.00
2	Shrub and thorny jungle clearing along the Tank bund / Canal / Spill tail canal /road way and reservations including uprooting stumps removing outside and burning to ashes where ever necessary as directed.	ha				107,800.00	107,800.00
3	Secondary growth jungle clearing along the tank bund / Canal / Spill tail canal / road way and reservations including uprooting and removing outside and burning to ashes as directed.	ha				81,400.00	81,400.00
4	Weeding and clearing along the tank bund / Canal / Spill tail canal /road way and reservations as directed.	m ²				8.00	8.00
5	Stripping top soil along the upstream slope, downstream slope and top of the bund to a thickness of 0.075 meters in order to receive new earth and spoils to be disposed outside the reservation as directed	m ³				1,727.00	1,727.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
6	Scarifying top soil along the upstream slope, downstream slope and top of the bund / canal bund to a thickness of 0.025 meters in order to receive new earth and spoils to be disposed outside the reservation as directed	m ²				44.00	44.00
6.10.2 CLEARING WORKS - MACHINERY							
7	Light jungle clearing along the tank bund / Canal / Spill tail canal / road way and reservations including uprooting stumps removing outside and burning to ashes as directed.	ha				42,248.00	52,130.00
8	Shrub and thorny jungle clearing along the Tank bund / Canal / Spill tail canal / road way and reservations including uprooting stumps removing outside and burning to ashes where ever necessary as directed.	ha				28,165.00	34,753.00
9	Medium jungle clearing along the tank bund / Canal / Spill tail canal / road way and reservations including uprooting stumps removing outside and burning to ashes as directed.	ha				56,342.00	69,522.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
10	Common jungle clearing along the tank bund / Canal / Spill tail canal / road way and reservations including uprooting stumps removing outside and burning to ashes as directed.	ha				62,429.00	87,853.00
11	Heavy jungle clearing along the tank bund / Canal / Spill tail canal / road way and reservations including uprooting stumps removing outside and burning to ashes as directed.	ha				66,217.00	93,183.00
12	Stripping top soil along the upstream slope, downstream slope and top of the bund to a thickness of 0.075 meters in order to receive new earth and spoils to be disposed outside the reservation as directed	m ³				221.00	249.00
6.10.3 EARTH WORK - MANUAL							
13	Earth Excavation in foundation and back filling / spoil to waste / dump including watering and compaction	m ³				2,288.00	2,288.00
14	Borrowing earth from identified borrow areas including transport and placing in tank bund to the design profile in 225 mm layers including watering and compacting	m ³				1,814.00	1,814.00
15	Earth Excavation from borrow and forming canal bund including watering and compacting	m ³				1,752.00	1,752.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
16	Earth Cutting in canal and forming canal bund including watering and compacting	m ³				2,002.00	2,002.00
17	Desilting in canal and spoil to waste as directed	m ³				1,554.00	1,554.00
6.10.4 EARTH WORK - MACHINERY							
18	Borrowing earth from identified borrow areas including transport, benching, placing in layers average thickness not more than 225mm as earth filling in existing bund embankment and picking roots, watering as directed, compacting by vibrating compactor	m ³				656.00	756.00
19	Earth Excavation from borrow and forming Canal bund including Compaction by Machinery and shaping by manual	m ³				586.00	750.00
20	Earth Cutting in canal or canal reservation and forming Canal bund including Compaction by Machinery and shaping by manual	m ³				404.00	568.00
21	Earth cutting in canal and spoil to waste as directed	m ³				377.00	461.00
22	Earth deduction along spill tail canal and spoil to deposit	m ³				481.00	591.00
23	Earth deduction along spill tail canal and level / heap	m ³				104.00	130.00
24	Earth Excavation from borrow and forming canal bund by manual Tpt by tractor (Earth cutting by machinery)	m ³				867.00	951.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
25	Cut open the bund and Spoil to waste by machinery	m ³				377.00	461.00
26	Cut open the bund by Machinery and filling by manual	m ³				1,117.00	1,201.00
27	Cut open the bund and refilling including watering and compaction by machinery	m ³				1,063.00	1,180.00
6.10.5 GRAVEL WORK							
28	Furnishing, transporting, placing and spreading of gravel on the bund including watering and compaction by manual	m ³				4,444.00	5,875.00
29	Furnishing, transporting, placing and spreading of gravel on the bund including watering and compaction by machinery	m ³				2,578.00	4,099.00
30	Furnishing and placing 0.15m thick gravel bedding for placement of Rip rap as directed	m ³				2,098.00	3,400.00
6.10.6 ROAD WAY							
31	Trimming and camparing road way by machinery	m ²				14.00	16.00
32	Earth Excavation from borrow and forming Road way	m ³				639.00	740.00
33	Furnishing, transporting, placing and spreading of gravel on the road way including watering and compaction	m ³				2,447.00	3,971.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
34	Supplying turf sods to site, preparation and dressing of surface, firmly placing and full turfing to new fill and watering and kept moist till grass root up as directed by the Engineer.	m ²				242.00	249.00
6.10.7 CONCRETE - MANUAL							
35	1:3:6(40) Ct. sand concrete compacting with porker viberator including curing without form work	m ³				25,322.00	23,353.00
36	1:3:6(40) Ct. sand concrete compacting with porker viberator including curing with form work	m ³				27,330.00	25,603.00
37	1:2:4(20) Ct. sand concrete compacting with porker viberator including curing without form work	m ³				26,804.00	27,117.00
38	1:2:4(20) Ct. sand concrete compacting with porker viberator including curing with form work	m ³				29,484.00	30,121.00
39	1:1 1/2:3(20) Ct. sand concrete compacting with porker viberator including curing without form work	m ³				29,719.00	30,028.00
40	1:1 1/2:3(20) Ct. sand concrete compacting with porker viberator including curing with form work	m ³				31,371.00	31,878.00
6.10.8 CONCRETE - MACHINERY (MIXTURE)							
41	1:3:6(40) Ct. sand concrete using concrete mixer and compacting with porker viberator including curing without form work	m ³				22,401.00	20,388.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
42	1:3:6(40) Ct. sand concrete using concrete mixer and compacting with porker viberator including curing with form work	m ³				24,409.00	22,638.00
43	1:2:4(20) Ct. sand concrete using concrete mixer and compacting with porker viberator including curing without form work	m ³				23,881.00	24,150.00
44	1:2:4(20) Ct. sand concrete using concrete mixer and compacting with porker viberator including curing with form work	m ³				26,562.00	27,153.00
45	1:1 1/2:3(20) Ct. sand concrete using concrete mixer and compacting with porker viberator including curing without form work	m ³				26,797.00	27,060.00
46	1:1 1/2:3(20) Ct. sand concrete using concrete mixer and compacting with porker viberator including curing with form work	m ³				28,468.00	28,933.00
6.10.9 RUBBLE WORK							
47	Supplying and placing 150-225mm random rubble masonry work with 1:5 ct.sand motor	m ³				14,909.00	16,152.00
48	Supplying and placing 225mm thick random rubble pitching work using 150-225mm rubble with 1:5 ct.sand motor	m ²				3,391.00	3,685.00
49	Supplying and heaping 300 - 450 mm rubble for rip rap	m ³				3,316.00	4,615.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
50	Placing Rip-Rap from the dumped rubble an average thickness of 300/450 mm on upstream slope of bund as directed by the Engineer. (Rate includes the necessary internal transport and loading)	m ³				506.00	506.00
51	Removing existing collapsed rip -rap and heaping the rubble as directed by the Engineer.	m ³				462.00	462.00
52	Removing and re packing rip rap as directed by the Engineer.	m ³				924.00	924.00
53	Supplying and placing 150-225mm rubble packing	m ³				4,090.00	5,471.00
6.10.10 REINFORCEMENT							
54	Supplying bending and placing QT Rib bar as reinforcement	kg				460.00	460.00
6.10.11 FORMWORK							
55	Furnishing and making of form work made out 20mm thick plywood with necessary frame and supports including fixing and removing as directed	m ²				1,019.00	1,142.00
6.10.12 HUME PIPES							
56	Supplying, laying and jointing 100 mm dia hume pipe in position	l.m				3,444.00	3,444.00
57	Supplying, laying and jointing 150 mm dia hume pipe in position	l.m				4,026.00	4,026.00
58	Supplying, laying and jointing 225 mm dia hume pipe in position	l.m				5,095.00	5,095.00
59	Supplying, laying and jointing 300 mm dia hume pipe in position	l.m				6,361.00	6,361.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
60	Supplying, laying and jointing 375 mm dia hume pipe in position	l.m				6,860.00	6,860.00
61	Supplying, laying and jointing 450 mm dia hume pipe in position	l.m				8,009.00	8,009.00
62	Supplying, laying and jointing 600 mm dia hume pipe in position	l.m				12,271.00	12,271.00
63	Supplying, laying and jointing 900 mm dia hume pipe in position	l.m				19,706.00	19,706.00
64	Supplying, laying and jointing 1200 mm dia hume pipe in position	l.m				38,611.00	38,611.00
6.10.13 GATES							
65	Supplying and fixing 150mm Dia C.I Gate with complete set including spindle long, base plate, Brass nut, Rag Bolts,ect in position	Nr				62,227.00	62,227.00
66	Supplying and fixing 225mm Dia C.I Gate with complete set including spindle long, base plate, Brass nut, Rag Bolts,ect in position	Nr				89,227.00	89,227.00
67	Supplying and fixing 300mm Dia C.I Gate with complete set including spindle, base plate, Brass nut, Rag Bolts,ect in position	Nr				94,859.00	94,859.00
68	Supplying and fixing 375mm Dia C.I Gate with complete set including spindle, base plate, Brass nut, Rag Bolts,ect in position	Nr				104,859.00	104,859.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
69	Supplying and fixing 450mm Dia C.I Gate with complete set including spindle, base plate, Brass nut, Rag Bolts,ect in position	Nr				143,221.00	143,221.00
70	Supplying and fixing 600mm Dia C.I Gate with complete set including, base plate, Brass nut, Rag Bolts,ect in position	Nr				209,113.00	209,113.00
71	Supplying and fixing 750mm Dia C.I Gate with complete set including, base plate, Brass nut, Rag Bolts,ect in position	Nr				389,738.00	389,738.00
72	Supplying and fixing 900mm Dia C.I Gate with complete set including spindle, base plate, Brass nut, Rag Bolts,ect in position	Nr				491,155.00	490,805.00
73	Supplying fabricating and installation of 1350mm x 750m size steel paneled gate	Nr				112,167.00	122,819.00
6.10.14 MISCELLINIOUS							
74	Supplying and fixing of 12mm dia. 0.45 m long mild steel dowels	Nr				581.00	581.00
75	Supplying and fixing of 16mm dia. 0.45 m long mild steel dowels	Nr				787.00	787.00
76	Chemical Anchoring for 10 mm dia bar 100 mm anchoring length (excluding anchor bar)	Nr				435.00	435.00
77	Furnishing and fixing 50*100mm R.C.C. hand rails with 2 Nos. 10mm dia. Reinforcement including formwork	m				1,783.00	1,821.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
78	Providing guard stones as per type NP/IRR/GS/Type No 01	Nr				5,526.00	5,616.00
79	Providing of 50 x 100 weep holes as per type NP/IRR/WH/Type No 01	Nr				2,625.00	2,261.00
80	Water Pumps 50 mm (2")	Hr				625.00	500.00
81	Water Pumps 75 mm (3")	Hr				1,000.00	562.00
82	Supplying of empty C.I.C. pohora bags (50kg size of fertilizer)	Nr				150.00	150.00
83	Forming of sand in pohora bags.	Nr				73.00	73.00
84	Stitching of sand bags.	Nr				11.00	11.00
85	Laying of sand bags.	Nr				55.00	55.00
86	Removing of sand bags.	Nr				55.00	55.00
87	Water level measuring gauge	m ²				51,441.00	51,441.00
88	Expansion joints in concrete floors filling with bitumen and sand mix (to full depth of concrete and rendering).	m ²				2,877.00	2,849.00
6.10.15 GABIONS							
89	Furnishing, Lacing & Placing of PVC Coated 1 x 0.5 x 0.5 m Gabions boxes	Nr				5,680.00	5,680.00
90	Furnishing, Lacing & Placing of PVC Coated 1.0 x 1.0 x 1.0 m Gabions boxes	Nr				13,538.00	13,538.00
91	Furnishing, Lacing & Placing of PVC Coated 1.5 x 1.0 x 1.0 m Gabions boxes	Nr				17,787.00	17,787.00
92	Furnishing, Lacing & Placing of PVC Coated 2.0 x 1.0 x 1.0 m Gabions boxes	Nr				25,330.00	25,330.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
93	Furnishing, Lacing & Placing of PVC Coated 2.0 x 1.0 x 0.5 m Gabions boxes	Nr				16,705.00	16,705.00
94	Furnishing, Lacing & Placing of PVC Coated 3.0 x 1.0 x 1.0 m Gabions boxes	Nr				35,259.00	35,259.00
95	Furnishing, Lacing & Placing of PVC Coated 3.0 x 1.0 x 0.5 m Gabions boxes	Nr				22,718.00	22,718.00
96	Furnishing, & Laying Polyfelt Geosynthetics 1.5mmthk. sheet for gabion boxes	m ²				440.00	440.00
97	Furnishing, & Laying Polyfelt Geosynthetics 2.5mmthk. sheet for gabion boxes	m ²				660.00	660.00
98	Furnishing, & Packing 225 x 150 mm random rubble in to Gabion boxes	m ³				7,601.00	9,382.00

6.10.16 AGRICULTURE WELLS

99	Earth Excavation in foundation 0-5 ft. lift up to 5ft. Spread with in 100ft. by Machinery and shaping by manual	m ³				627.00	882.00
100	Earth Excavation in foundation 5-10 ft. lift up to 10ft. Spread with in 100ft. by Machinery and shaping by manual	m ³				634.00	892.00
101	Earth Excavation in foundation 10-15 ft. lift up to 15ft. Spread with in 100ft. by Machinery and shaping by manual	m ³				655.00	922.00
102	Earth Excavation in foundation 15-20 ft. lift up to 20ft. Spread with in 100ft. by Machinery and shaping by manual	m ³				669.00	942.00

No	Description	Unit	Rate (Rs) without profit and overhead				
			Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar
103	Soft Rock Excavation in foundation 0-5 ft. lift up to 5ft. Spread with in 100ft. by Machinery and shaping	m ³				1,047.00	1,482.00
104	16mm thick cement and sand 1:3 plastering	m ²				954.00	928.00
105	100mm Cement concrete block in 1:4:5[20mm] masonry in 1:5 cement and sand.	m ²				3,666.00	3,643.00
106	125mm Cement concrete block in 1:4:5[20mm] masonry in 1:5 cement and sand.	m ²				4,582.00	4,553.00