

Nepal Engineering College
(Affiliated to Pokhara University)
Changunarayan, Bhaktapur

RATE ANALYSIS (FY 2078/079)

ITEM	Excavation in drain and foundation for gabion and dry wall structures including removal and satisfactory disposal of all materials					
	a) Ordinary soil					
UNIT	cu. m.					
Source	Type	Quantity	Unit	Rate	Amount	Total (Rs.)
Labor	Unskilled	0.50	m-day	890.00	445.00	445.00
			Actual Rate			445.00
			Tools ,Plants & Equipments @ 3%			13.35
			Sub Total			458.35
			Rate per m³			458.35
	b) Hard soil					
UNIT	cu. m.					
Source	Type	Quantity	Unit	Rate	Amount	Total (Rs.)
Labor	Unskilled	0.60	m-day	890.00	534.00	534.00
			Actual Rate			534.00
			Tools ,Plants & Equipments @ 3%			16.03
			Sub Total			550.03
			Rate per m³			550.03
ITEM	Backfill behind structure with suitable common approved material obtained either from borrow pits or other sources					
UNIT	cu. m.					
Source	Type	Quantity	Unit	Rate	Amount	Total (Rs.)
Labor	Unskilled	0.25	m-day	890.00	222.50	222.50
Equipment						
Lead						
			Actual Rate			222.50
			Tools ,Plants & Equipments @ 3%			6.68
			Sub Total			229.18
			Rate per m³			229.18
Description	Preparation of subgrade to designed grade and camber including watering and compaction.					
UNIT	sq. m.					
Source	Type	Unit	Quantity	Rate	Amount	Total
Labour	Unskilled	m-day	0.10	890.00	89.00	89.00
Construction	Tools & Plants @3%				1.91	2.67
Materials						
T & P	Road roller (10 M.T.)	hr.	0.017	1,500.00	25.50	15.30
			Total			80.71
			Rate per m²			106.97

	Carring out the construction operations of granular sub-base Work with naturally found sand mixed gravel including loading, unloading &					
UNIT	m3					
Source	Type	Quantity	Unit	Rate	Amount	Total
Labour	Skilled	0.005	m-day	1,200.00	6.00	6.00
	Unskilled	0.04	m-day	890.00	35.50	35.50
Construction						
Materials	Gravel	1.28	cu.m.	2,606.1	3,335.79	3,335.79
	Diesel	0.79	ltr.	181.00	142.99	142.99
Equipment	Grader	0.022	hr.	1,600.0	35.20	35.20
as per [3-1],1200 of DOR standard Specifications.	Water browser	0.038	hr.	650.00	24.70	24.70
	Loader	0.011	hr.	1,200.0	13.20	13.20
	Vibrator Roller (self pro	0.022	hr.	1,500.00	33.00	33.00
			Total			3588.48
			Rate per m3			3588.48
ITEM	Dry masonry with rubble stone.					
Description	Including full compensation for all labour, material and other incidentals required to complete and work as per the specification. Work using specially dressed stones on the face of walls with batter and makes provision for weep holes as necessary.					
UNIT	m3					
Source	Type	Quantity	Unit	Rate	Amount	Total (Rs.)
Labor	Skilled	0.5	m-day	1200.00	600	600
	Unskilled	1.50	m-day	890.00	1335	1335
Construction	Collection of Stone	1.10	cu.m.	2255.65	2481.22	2481.22
material						
				Actual Rate		4416.22
				Rate per m³		4416.22
ITEM	Reinforcement for RCC work. It includes procuring steel, its bending, placing, binding and fixing in position as shown on the drawings and as directed by the Engineer. It also includes all devices for keeping reinforcement in approved position and jointing as per approved method with due allowances for wastage, overlaps, spacer bars and annealed steel wire for binding					
	This applies for General Bending requirements. When the above provision is not adequate or in other words, for specific type of bending the following norms are applicable.					
UNIT	Metric-Ton					
Source	Type	Quantity	Unit	Rate	Amount	Total (Rs.)
Labor	Skilled	7.00	m-day	1200.00	8400.00	8400.00
	Unskilled	7.00	m-day	890.00	6230.00	6230.00
Construction	Reinforcement bars	1.05	MT	115000.00	120750.00	120750.00
Materials	Binding Wire	10.00	kg	93.00	930.00	930.00
			Actual Rate			136310.00
			subtotal			136310.00
			Rate per MT			136310.00
			Rate per Kg			136.31

ITEM	Cement concrete work. It includes all labour and material required for mixing, placing in position,				
	vibrating, compacting, finishing, curing and all other incidentals required to produce concrete of specified				
	strength as per the specifications. The rate includes the work of making, fixing and removing of all				
	centres and forms required for the work.				
	A. Works in Foundation				
	a) M10 Grade (1:3:6 mix by volume)				
	- Collection of rubble for the aggregates at	- 40mm			
	- Breaking of stone at quarry for aggregate	- 20mm			
	- Collection and screening of sand at quarry (refer Annex I)				
	- Mixing of concrete and its placing with compaction and finishing.				
	- Water carrying for mixing concrete.				
	- Curing and other incidentals.				
UNIT	m ³				
S.N.					
Source	Type	Quantity	Unit	Rate	Amount
Labor	Skilled	0.50	m-day	1200.00	600.00
	Unskilled	3.25	m-day	890.00	2063.75
Construction	Cement	220	kg	10.37	2281.50
Materials	Aggregate 40 mm	0.65	cu.m.	2086.08	1355.95
	Aggregate 20 mm	0.24	cu.m.	3876.08	930.26
	Sand	0.47	cu.m.	1660.46	780.42
			Actual Rate		8840.63
			Tools ,Plants & Equipments @ 3%		265.22
			Sub Total		9105.85
			Rate per m³		9105.85
ITEM	Cement concrete work. It includes all labour and material required for mixing, placing in position,				
	vibrating, compacting, finishing, curing and all other incidentals required to produce concrete of specified				
	strength as per the specifications. The rate includes the work of making, fixing and removing of all				
	centres and forms required for the work.				
	B. Work in super structural components (beams, slabs, abutment caps, etc.)				
	a) M20 Grade (1:1.5:3 mix by volume)				
	- Mixing placing of concrete with compaction and finishing.				
	-Water carrying for mixing concrete.				
	- Curing and other incidentals.				
UNIT	m ³				
Source	Type	Quantity	Unit	Rate	Amount
Labor	Skilled	0.50	m-day	1200.00	600.00
	Unskilled	4.37	m-day	890.00	3889.30
Construction	Cement	400	kg	10.37	4148.19
Materials	Aggregate 20 mm	0.57	cu.m.	3876.08	2209.37
	Aggregate 10 mm	0.29	cu.m.	5146.08	1492.36
	Sand	0.42	cu.m.	1660.46	697.39
			Actual Rate		13036.61
			Tools ,Plants & Equipments @ 3%		391.10
			Sub Total		13427.71
			Rate per m³		13427.71

ITEM	Cement concrete work. It includes all labour and material required for mixing, placing in position, vibrating, compacting, finishing, curing and all other incidentals required to produce concrete of specified strength as per the specifications. The rate includes the work of making, fixing and removing of all centres and forms required for the work.				
	B. Work in super structural components (beams, slabs, abutment caps, etc.)				
	a) M15 Grade (1:2:4 mix by volume)				
	- Mixing placing of concrete with compaction and finishing.				
	-Water carrying for mixing concrete.				
	- Curing and other incidentals.				
UNIT	m3				
Source	Type	Quantity	Unit	Rate	Amount
Labor	Skilled	0.50	m-day	1200.00	600.00
	Unskilled	3.31	m-day	890.00	2945.90
Construction	Cement	320	kg	10.37	3318.55
Materials	Aggregate 40mm	0.52	cu.m.	2086.08	1084.76
	Aggregate 20mm	0.22	cu.m.	3876.08	852.74
	Aggregate 10mm	0.11	cu.m.	5146.08	566.07
	Sand	0.47	cu.m.	1660.46	780.42
			Actual Rate		10148.45
			Tools ,Plants & Equipments @ 3%		304.45
			Sub Total		10452.90
			Rate per m³		10452.90
ITEM	Supplying, Laying , fitting and fixing of hume pipe having a dia. 60 cm.				
UNIT	Rm.				
Source	Type	Quantity	Unit	Rate	Amount
Labor	Skilled	0.05	m-day	1200.00	60.00
Construction	Hume pipe 600 mm	1.00	rm	5468.00	5468.00
	Unskilled	0.20	m-day	890.00	178.00
Materials	Jute	2.50	nos	32.50	0.00
	Cement	3.00	kg	10.37	81.25
	Bitumen	0.50	kg	120.00	60.00
	Sand	0.004	cu.m.	1660.46	6.64
			Actual Rate		5886.39
			Sub Total		5886.39
			Rate per r.m.		5886.39

ITEM	Bituminous concrete(95.5 cum)				
Labour		Unskilled	15	md	890.00
		Skilled	5	md	1,200.00
Material		Bitumen	12.94	t	73,071.86
		Aggregate10-20mm	49.48	cum	4,481.67
		Aggregate 5-10mm	32.52	cum	4,219.48
		Aggregate Below 5.6 mm	56.55	cum	3,919.83
		Filler	2.83	t	2,450.00
Equipment		Paver Finisher	6	hr	2,000.00
		Generator (< 2 KVA)	6	hr	300.00
		Smooth Wheel Roller	12	hr	2,200.00
		Pneumatic Tyred Roller	6	hr	1,300.00
		Batch mix HEMP	6	hr	2,200.00
			Actual Rate		1,613,670.62
			Sub total		1,613,670.62
			Rate per cum		16897.07455

