



DEPARTMENT OF PUBLIC WORKS

PROPOSED

CONSTRUCTION

OF

REINFORCED CONCRETE RAMP FOR PWD

AT

NG-CDF NEW MAIN OFFICE BLOCK ,LAISAMIS

BILL OF QUANTITIES

PREPARED AND ISSUED BY

COUNTY WORKS OFFICER

MARSABIT

Sep-21

PROPOSED INSTALLATION OF REINFORCED CONCRETE-R.C RAMP

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO.1</u>				
	<u>SUBSTRUCTURES</u> (ALL PROVISIONAL)				
	Site clearance				
A	Clear site of works of shrubs, bush and small trees, grub up their roots and burn debris	90	SM	450	40,500.00
B	Destroy termite nests within site of works, take out and destroy queens, impregnate holes and tunnels with insecticide and fill voids with approved material	90	SM	400	36,000.00
C	Excavate to remove top soil and load, wheel and deposit where directed, average depth 200mm Excavate in red soil including maintaining and supporting sides and keeping free from water, mud and fallen objects	90	SM	450	40,500.00
D	For Columns and column bases starting from reduced levels not exceeding 1.5M deep	45.36	CM	600	27,216.00
E	Ditto commencing at 1.5m n.e 3.0m deep	20	CM	600	12,000.00
F	Extra over for excavating in soft rock	13.608	CM	1400	19,051.20
G	Extra over for excavating in hard rock	5	CM	2400	12,000.00
H	Trim and level bottom of excavations	30.24	SM	300	9,072.00
	Total Carried to Collection Page 04				196,339.20

PROPOSED INSTALLATION OF REINFORCED CONCRETE-R.C RAMP

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Disposal				
A	Backfilling around foundations	50	CM	450	22,500.00
B	Load and cart away surplus spoil to a city council dump site	33	CM	600	19,800.00
Total Carried to Collection Page 04					42,300.00

PROPOSED INSTALLATION OF REINFORCED CONCRETE-R.C RAMP

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Vibrated reinforced concrete class 20 (1:2:4)				
A	Columns	2.8	CM	17500	49,000.00
B	Column bases	10	CM	17500	175,000.00
	Reinforcement (all provisional)				
	High yield deformed steel bar reinforcement to BS4461				
C	16mm diameter	460	Kg	180	82,800.00
D	12mm diameter	520	Kg	180	93,600.00
E	8mm diameter	240	Kg	180	43,200.00
	Total Carried to Collection Page 04				443,600.00

PROPOSED INSTALLATION OF REINFORCED CONCRETE-R.C RAMP

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Formwork				
A	Sides of columns	56	SM	800	44,800.00
B	Sides of columns bases	33	SM	800	26,400.00
					71,200.00
	COLLECTION				
	From page 1				196,339.20
	From page 2				42,300.00
	From page 3				443,600.00
	From page 4 above				71,200.00
	Total of Element 01 Carried to Summary				753,439.20

PROPOSED INSTALLATION OF REINFORCED CONCRETE-R.C RAMP

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO. 2</u>				
	<u>R.C. SUPERSTRUCTURE</u>				
	Vibrated reinforced concrete class 20/20				
A	Beams	3	CM	17500	52,500.00
B	Columns	6	CM	17500	105,000.00
C	Ramp, thickness 150mm	75	SM	17500	1,312,500.00
	Reinforcement (Provisional)	20.25 2025			
	High yield deformed steel bar reinforcement to BS 4461				
D	16mm diameter	650	Kg	180	117,000.00
E	12mm diameter	475	Kg	180	85,500.00
F	10mm diameter	1021	Kg	180	183,780.00
G	8mm diameter	460	Kg	180	82,800.00
					1,939,080.00

PROPOSED INSTALLATION OF REINFORCED CONCRETE-R.C RAMP

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO. 2 CONT'D</u>				
	<u>R.C. SUPERSTRUCTURE</u>				
	Formwork				
A	Sides of columns	60	SM	800	48,000.00
B	Sides and soffits of beams	80	SM	800	64,000.00
C	Soffites of suspended slabs(ramp)	75	SM	800	60,000.00
	Total Carried to Collection below;				172,000.00
	COLLECTION				
	From page 5				1,939,080.00
	From page 6 above				172,000.00
	Total Carried to collection page 7				2,111,080.00

PROPOSED INSTALLATION OF REINFORCED CONCRETE-R.C RAMP

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO. 3</u>				
	<u>FINISHES</u>				
	Prepare and apply one undercoat and two finishing coats of 1st quality Weather guard or Silicon paint to:-				
A	General plastered surfaces of beams	70	SM	750	52,500.00
B	General plastered surfaces of columns	90	SM	750	67,500.00
C	General plastered surfaces of Slab Soffits	85	SM	750	63,750.00
	Total Carried to Collection Below				183,750.00
	<u>Terrazzo</u>				
D	Terazzo (1:3) with approved coloured chippings ground and polished smooth (25mm thick) to insitu cement and sand (1:3) screeded beds (15mm thick) on concrete H				
	40mm thick in ramps and intermediate landings	70	SM	2700	189,000.00
	<u>Plaster</u>				
	<u>25mm thick cement sand (1:3) plaster to:-</u>				
E	Sofits of suspended slabs (landings and sloping soffits) wood float	70	SM	600	42,000.00
F	ditto Surface of Beams	70	SM	600	42,000.00

PROPOSED INSTALLATION OF REINFORCED CONCRETE-R.C RAMP

G	ditto surface of Columns	75	SM	600	45,000.00
	Total of Element 03 Carried to Summary				501,750.00

PROPOSED INSTALLATION OF REINFORCED CONCRETE-R.C RAMP

ITEM	DESCRIPTION	QNTY	UNIT	RATE	AMOUNT
	ELEMENT NO. 4				
	<u>BALUSTRADING AND RAILING</u>				
	<u>RHS section framing, factory primed ;with red oxide primer including cutting and pinning and fixing lugs to concrete .Hollow Sections as described to:</u>				
A	1100mm high , 50 x 50x4mm thick rectangular hollow section baluster, fish tailed and grouted on one end at 500mm centres and screwed/bolted on the other to handrail infilled with 50x25x4mm thike top and bottom rails 500mm long each and 25x4mm thick flats all cut and welded to approved detail	324	Lm	1100	356,400.00
B	Wrot camphor or other equal and approved hardwood selected and kept clean A 125x50mm racking handrail, screwed onto steel balustrading (m.s)	45	Lm	900	40,500.00
	<u>Prepare and apply tone undercoat and three finishing coats gloss paint on:-</u>				
C	General surfaces of mild steel balustrades	98	M2	600	58,800.00
	<u>Prepare and apply three coats polyurethane or other similar and approved celar finish on</u>				
D	Handrail wood surfaces 100-200mm girth	45	M	800	36,000.00
	Total for Element No. 4(Balustrading & Railing) Carried to Summary				491,700.00

PROPOSED INSTALLATION OF REINFORCED CONCRETE-R.C RAMP

ITEM	DESCRIPTION			AMOUNT
	<u>SUMMARY</u>			
1	Substructure			753,439.20
2	Reinforced Concrete Superstructure			2,111,080.00
3	Finishes			501,750.00
4	Balustrading and Railings			491,700.00
	<u>SUB-TOTAL 1</u>			3,104,530.00
	Add 10% contingency			310,453.00
	Add 5% for Engineer's Supervision fee			155,226.50
	<u>SUB-TOTAL 2</u>			3,570,209.50
	ADD VAT 16 %			496,724.80
	TOTAL FOR THE RAMP-R.C			4,066,934.30