

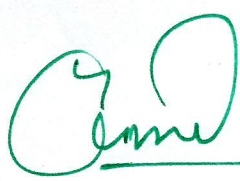
47
54

Muck Management Plan

Name of Work:-C/O link road from Kanol to Morchh KM 0/0 to 9/140.

1	Total quantity of muck to be generated from cutting	36506.80 M ³
2	Deduction of useful stone as required under clauses of agreement to be executed by the Executive Engineer of Project implementing Unit Division on behalf of Govt. of H.P. for suing in the project.	2508.00 M ³
3	Net balance quantity of debris/muck	33998.80 M ³
4	Add quantity available on site with swell factor @ 25% on PW & JW	8499.70 M ³
	Total (A)	45006.50 M³
5	Less for materials required for dumping in behind R/wall etc. @ 10% of A	4500.65 M ³
6	Less for materials required for leveling of proposed road @ 15% of A	6750.97 M ³
7	Less materials/muck required for leveling/filling of road on the analogy of half cutting and half fitting @ 40% of A	18002.60 M ³
	Total (B)	29254.22 M³
8	Materials/Muck left at site which will require carriage for proper dumping into the recognized sites as per the illustration of forest and environment Ministry reinforced by various judgment of the Apex court Govt. of India i.e. (A-B)	15752.28 M ³
9	Design proposed for dumping sites (attached)	5 Nos
10	Total capacity of dumping sites as per details attached	17670.00 M ³
11	Area in hectare for dumping sites	
	i. Forest area	0.3800 hect.
	ii. Total	0.3800 hect.


Assistant Engineer
Shahpur Sub Division
H.P. R.W.D. Shahpur


Executive Engineer
Kangra Division
HP, PWD, Kangra


Divisional Forest Officer
Forest Division
Dharamshala

DETAIL OF MEASUREMENTS

478
53

NAME OF WORK:- construction of Kamol to Moreh Road
Km 0/0 to 9/160

[BH:- Construction of wire cradle work for dumping
siles]

S.No	Description of Items	No	L	B	HT.	Quantity
1)	Earth work in excavation for structures as per 22g and technical specifications <u>Wire cradle work</u>					
	Dumping Site No: 01	1	40.00	2.50	$\frac{0.60+0.70}{2} = 0.65$	65.00 cum
	—do— 02	1	60.00	2.50	$\frac{0.30+0.45}{2} = 0.375$	56.25 cum
	—do— 03	1	50.00	2.50	$\frac{0.45+0.65}{2} = 0.55$	68.75 cum
	—do— 04, 05	2	50.00	2.50	$\frac{0.50+0.75}{2} = 0.625$	156.25 cum
					Total =	346.25 cum
2)	Providing and laying of boulders apron laid in wire cradle with 4mm dia wire. <u>Wire cradle work</u>					
	Dumping Site No: 01					
	1st Layer	1	40.00	2.50	1.25	125.00 cum
	2nd Layer	1	40.00	2.25	1.25	112.50 cum
	3rd Layer	1	40.00	2.00	1.25	100.00 cum
	4th Layer	1	40.00	1.75	1.25	87.50 cum
	5th Layer	1	40.00	1.50	1.25	75.00 cum
	6th Layer	1	40.00	1.25	1.25	62.50 cum
	Dumping Site No: 02					
	1st Layer	1	60.00	2.50	1.25	187.50 cum
	2nd Layer	1	60.00	2.00	1.25	150.00 cum
	3rd Layer	1	60.00	1.75	1.25	131.25 cum
	4th Layer	1	60.00	1.50	1.25	112.50 cum
	5th Layer	1	60.00	1.25	1.25	93.75 cum
					Total =	1237.50 cum

①	②	③	④	⑤	⑥	⑦
	Dumping Sites No:- 03, 04 & 05				065 A/F	1237.50 cum
	1st Layer	3	50.00	2.50	1.25	468.75 - -
	2nd Layer	3	50.00	2.00	1.25	375.00 - -
	3rd Layer	3	50.00	1.75	1.25	328.13 - -
	4th Layer	3	50.00	1.50	1.25	281.25 - -
	5th Layer	3	50.00	1.25	1.25	234.38 - -
					606.25	2925.01 cum

Assistant Engineer
Shahpur Sub Division
H.P., P.W.D. Shahpur

Divisional Forest Officer
Forest Division
Dharamshala

Executive Engineer
Kangra Division
HP, PWD, Kangra

ABSTRACT OF COST

S6
S7

NAME OF WORK:- Construction of Kanol to Morekh Road
km 9/0 to 9/140

[S4:- Construction of Wire crate work for dumping sites]

S/No	Description of Items	Quantity	Rate	Unit	Amount
1)	Earthwork in excavation for structures as per drawing and technical specifications clause 305.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious materials and disposal upto lead of 50mtrs dressing of sides and bottom and back filling in trenches with excavated suitable materials	246.25 m ³	128.15	Per m ³	44372.00
2)	Providing and laying of boulder apron laid in wire crates with 4mm dia wire conforming to IS: 280 and IS: 4826 in 100mm x 100mm mesh woven diagonally including 10% extra for laps and joints laid with stone boulders weighing not less than 25 kg each as per drawing and technical specifications clause 130.	292501 m ³	1458.40	Per cum	42,65,835.00
Total = Rs					43,10,207.00

(Signature)

Assistant Engineer
Shahpur Sub Division
H.P. P.W.D. Shahpur

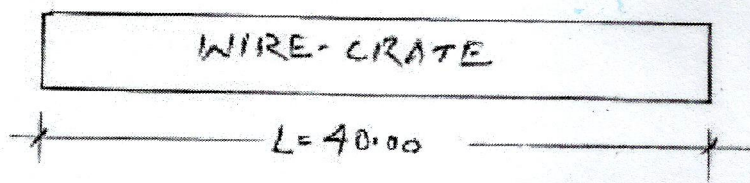
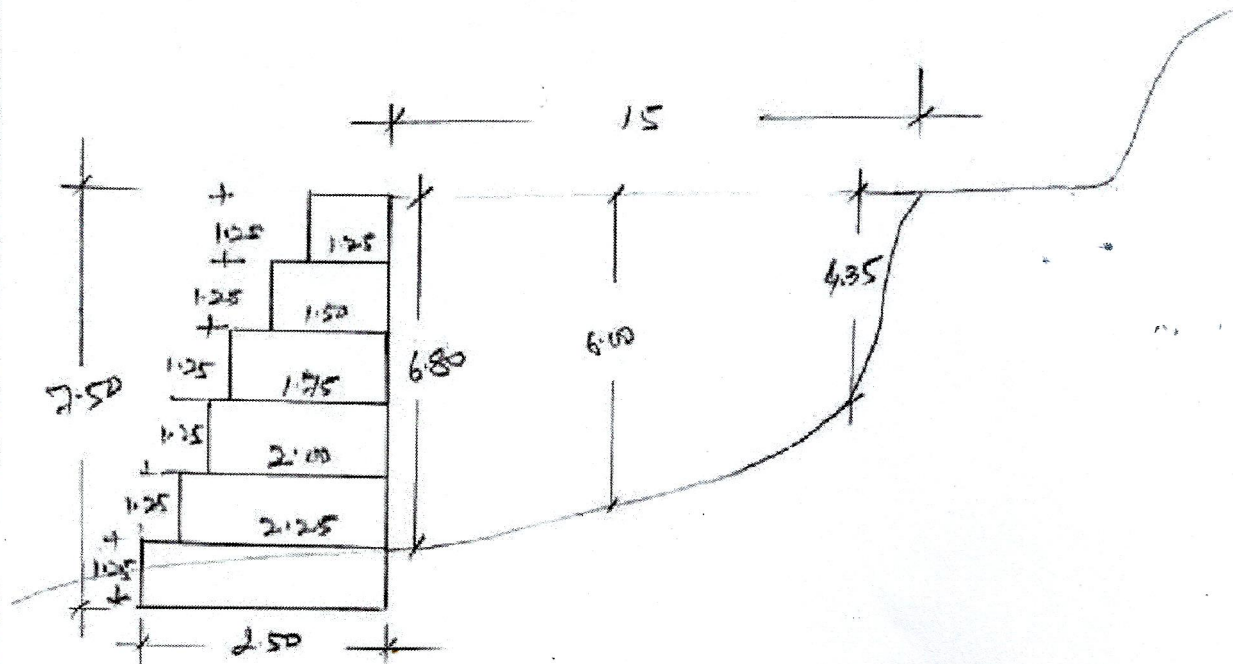
Executive Engineer
Kangra Division
HP, PWD, Kangra

(Signature)
Divisional Forest Officer
Forest Division
Dharamshala

MUCK DUMPING SITE NO - 01

NAME OF WORK:- C/O Kanol-Morch Road Km 9/0
to 9/140

RD = 0/00



$$\text{Area} = 40 \times 15 \times \frac{4.35 + 6.00 + 6.80}{3} = \underline{3430.00 \text{ cum}}$$

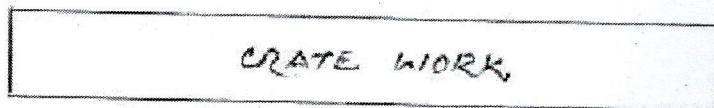
Divisional Forest Officer
Forest Division
Dharamshala

Assistant Engineer
Shahpur Sub Division
H.P. R.W.D. Shahpur

Executive Engineer
Kangra Division
HP, PWD, Kangra

50

RD 3/315

 $L = 60.00$

Area:- $60 \times 20 \times \frac{3.50 + 4.80 + 5.80}{3} = 5640.00 \text{ m}^3$

Assistant Engineer
Shahpur Sub Division
H.P., P.W.D. Shahpur

**Executive Engineer
Kangra Division
HP, PWD, Kangra**

60

60

RD 4/915

The diagram shows a cross-section of a road on the right and a rectangular area below it. The cross-section has a total width of 10.00. On the left, a curved line represents a ditch with a depth of 2.50 and a slope of 4:50. To the right of the ditch is a series of steps or a retaining wall. The steps have widths of 1.25, 1.50, 1.75, and 2.00. The total height of the steps is 6.75. The total width of the steps is 5.60. The total width of the road cross-section is 10.00. Below the cross-section is a rectangular area with a length of 50.00 and a width of 10.00. The area is labeled 'Area = 10.50 x 10.00 x (2.50 + 6.50 + 5.60) / 3 = 2100.00 m³'.

Area = 10.50 x 10.00 x $\frac{2.50 + 6.50 + 5.60}{3}$ = 2100.00 m³

Assistant Engineer
Shahpur Sub Division
H.P. P.W.D. Shahpur

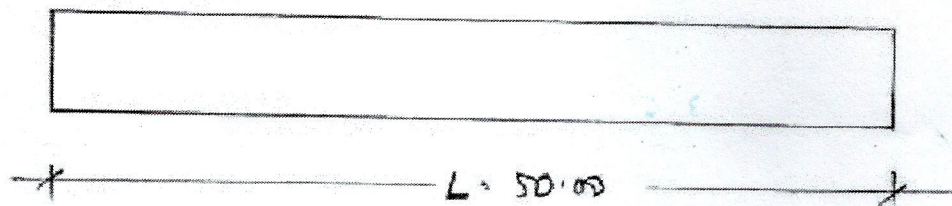
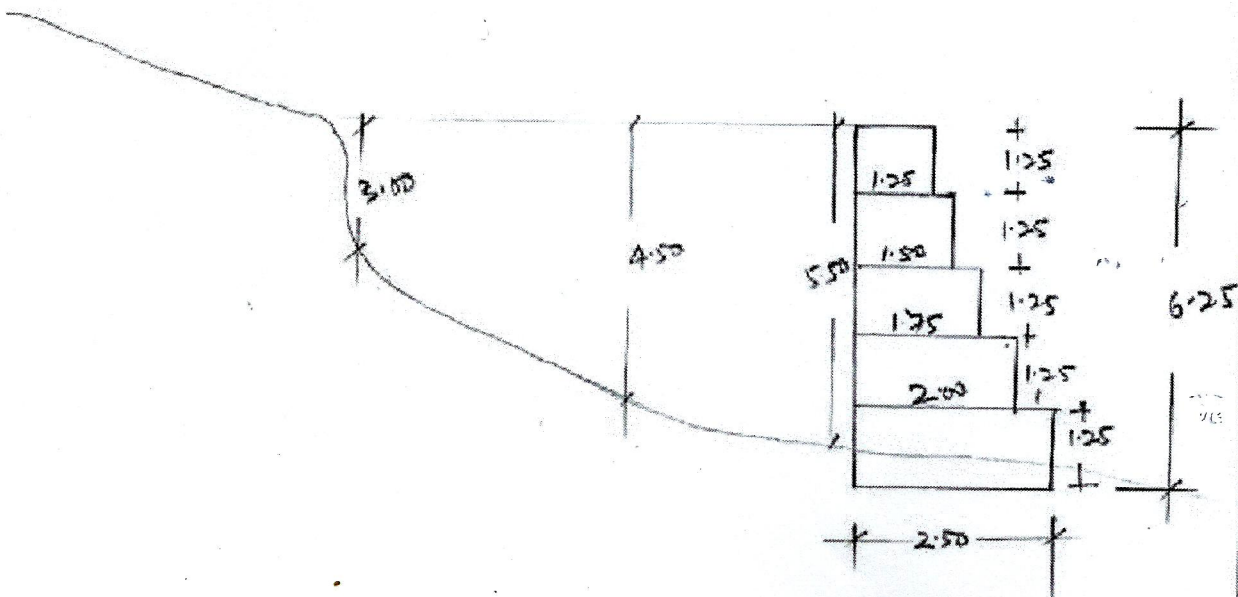
**Executive Engineer
Kangra Division
HP, PWD, Kangra**

MUCK DUMPING SITES No 04205

61

NAME OF WORK:- C/o Kanol - Morek Road km 0/0
to 9/140

RD 6/400 & 7/415



$$\text{Area} = 2 \times 50 \times 15 \times \frac{3.00 + 4.50 + 5.50}{2} = 6500.00 \text{ cum}$$

[Signature]

Divisional Forest Officer
Forest Division
Dharamshala

[Signature]
Assistant Engineer
Shahpur Sub Division
H.P., R.W.D. Shahpur

Executive Engineer
Kangra Division
HP, PWD, Kangra

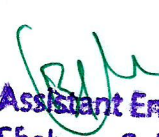
62

DETAIL OF DUMPING SITES

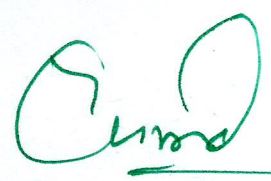
Name of Work :- Construction of Link Road from Kanool to Morch Road km 0/0 to 9/140

MUCK MANAGEMENT

S/N/O	Name of Dumping Site	RD/KM	Area coming under Dumping			Capacity of Dumping Sites
			Forest Area	Non-Forest Area	Total	
1)	Dumping Site No. 02	0/0 to 0/040	0.060	—	0.0600	3430.00 m ³
2)	—do— No. 02	3/315 to 3/375	0.120	—	0.1200	5640.00 "
3)	—do— No. 03	4/95 to 4/965	0.050	—	0.0500	2100.00 "
4)	—do— No. 04 & 05	6/400 to 6/450 & 7/415 to 7/465 (200.075)	0.150	—	0.1500	6500.00 "
					Total =	
					0.3800 Hect.	17670.00 Cum


Assistant Engineer
Shahpur Sub Division
H.P. P.W.D. Shahpur


Divisional Forest Officer
Forest Division
Dharamshala


Executive Engineer
Kangra Division
HP, PWD, Kangra

ANNEXURE - R3

COST ESTIMATION OF RECLAMATION OF DUMPING SITES OF CONSTRUCTION OF LINK ROAD KANOL TO
MORCH KM 0/00 to 9/140 IN DISTRICT KANGRA

S. NO.	DESCRIPTION	UNITS	QUANTITY	RATE (RS.)	AMOUNT (RS.)
A	ENGINEERING WORKS				
1	Wire Crates and Retaining Walls		L/S	L/S	4310207
B	BIOLOGICAL MEASURES				
1	Cost of Fence Post 25	Nos.	25	150	3750
2	Carriage of Fence Post over a distance of km to work site manually	Nos.	25	8	200
3	Fixing of fence post	Nos.	25	4.77	143
4	Cost of Barbed Wire	Qtl	0.25	5500	1375
5	Carriage of Barbed Wire by Vehicle	Qtl	0	L/s	4000
6	Carriage of Barbed wire to Work Site manually over a distance of km	Qtl	0.25	L/S	1000
7	Stretching & Fixing of Barbed Wire	Rmt	225	3.16	427
8	Interlacing of thorny bushes in Barbed wire	Rmt	225	2.74	370
9	Layout of pits	Ha.	0.38	68.15	55
10	Digging of pits 60 x 60 x 60 cm	Nos.	1690	6.98	24821
11	Filling of pits	Nos.	1690	1.42	5050
12	Cost of Plants	Nos.	1690	7	11830
13	Carriage of plants by vehicle	Nos.	1690	1.5	2535
14	Carriage of plants manually over a distance of km	Nos.	1690	2	3380
15	Planting of entire plant raised in polybags	Nos.	1690	8.73	31044
16	Planting of shrubs, grasses in interspaces		L/S	L/S	2000
17	Watering of plants during dry season		L/S	L/S	2000
18	Providing imported	Nos.	1690	5	8450
19	Watch and word	Mandays	50	200	10000
	Total (Rs.)				112430
C	Contingencies			L/S	10000
D	Maintenance from 1st to 7th Year				43200
	Grand Total (A+B+C+D)				4475837
	Or Say				4475800

Date : 12-07-2022

Place : Kangra


Executive Engineer,
Kangra Division,
NP, PWD, Kangra.


Divisional Forest Officer
Forest Division
Dharamshala

MAINTENANCE OF PLANTATION

FIRST YEAR MAINTENANCE WITH 25% MORTALITY

S. NO.	DESCRIPTION	UNITS	QUANTITY	RATE (RS.)	AMOUNT (RS.)
1	Redigging of Pits 60x60x60 cm	Nos.	423	4.2	1777
2	Filling of Pits 60x60x60 cm	Nos.	423	1.42	601
3	Cost of Plants	Nos.	423	7	2961
4	Carriage of Plants by Vehicle	-	423	1.5	635
5	Carriage of Plants manually over a distance of km	Nos.	423	2	846
6	Planting of entire plants	Nos.	423	7.36	3113
7	Repair of Fence	Rmt.	225	0.65	146
8	Repair of Fence Plants	Nos.	25	2.35	59
Total (Rs.)					10138
Or say					10100

SECOND YEAR MAINTENANCE WITH 25% MORTALITY

S. NO.	DESCRIPTION	UNITS	QUANTITY	RATE (RS.)	AMOUNT (RS.)
1	Redigging of Pits 60x60x60 cm	Nos.	338	4.2	1420
2	Filling of Pits 60x60x60 cm	Nos.	338	1.42	480
3	Cost of Plants	Nos.	338	7	2366
4	Carriage of Plants by Vehicle	-	338	1.5	507
5	Carriage of Plants manually over a distance of km	Nos.	338	2	676
6	Planting of entire plants	Nos.	338	7.36	2488
7	Repair of Fence	Rmt.	225	0.65	146
8	Repair of Fence Plants	Nos.	25	2.35	59
Total (Rs.)					8142
Or say					8100

Divisional Forest Officer
Forest Division
Dharamshala

Executive Engineer,
Kangra Division,
HP, PWD, Kangra.

THIRD & FORTH YEAR MAINTENANCE WITH 15% MORTALITY

S. NO.	DESCRIPTION	UNITS	QUANTITY	RATE (RS.)	AMOUNT (RS.)
1	Redigging of Pits 60x60x60 cm	Nos.	254	4.2	1067
2	Filling of Pits 60x60x60 cm	Nos.	254	1.42	361
3	Cost of Plants	Nos.	254	7	1778
4	Carriage of Plants by Vehicle	-	254	1.5	381
5	Carriage of Plants manually over a distance of km	Nos.	254	2	508
6	Planting of entire plants	Nos.	254	7.36	1869
7	Repair of Fence	Rmt.	225	0.65	146
8	Repair of Fence Plants	Nos.	25	2.35	59
Total (Rs.)					6169
Or say					6200

FIFTH, SIXTH & SEVENTH YEAR MAINTENANCE WITH 10% MORTALITY

S. NO.	DESCRIPTION	UNITS	QUANTITY	RATE (RS.)	AMOUNT (RS.)
1	Redigging of Pits 60x60x60 cm	Nos.	169	4.2	710
2	Filling of Pits 60x60x60 cm	Nos.	169	1.42	240
3	Cost of Plants	Nos.	169	7	1183
4	Carriage of Plants by Vehicle	-	169	1.5	254
5	Carriage of Plants manually over a distance of km	Nos.	169	2	338
6	Planting of entire plants	Nos.	169	7.36	1244
7	Repair of Fence	Rmt.	225	0.65	146
8	Repair of Fence Plants	Nos.	25	2.35	59
Total (Rs.)					4174
Or say					4200

Date : 12-07-2022

Place : Kangra


Executive Engineer,
Kangra Division,
M.P. PWD, Kangra.


Divisional Forest Officer
Forest Division
Dharamshala