

NATURAL RESOURCES DEVELOPMENT CORPORATION LTD.
FIELD RECORDS & VOLUME CALCULATION OF 2.0KM KHARSHONG FOREST ROAD 2024

Location : Kharshong FMU, Jakar Region
 Name of Road : 2.5km Forest Road
 Survey method : Zero line
 Road Length : 2000m

1 Mr. Bishal Subba, Civil Engineer, FRD, HO, NRDCL
 2 Mr. Sherab Namgay, Production In-Charge
 3 Ms. Sonam Tshomo, FA, Kharshong unit
 4 Ms. Phuntsho Wangmo, Depot care taker
 5 Mr. Sonam Jamtsho, Deputy Ranger, Kharshong FMU

St. No.	Grad. (%)	Dist. (m)	Side slope (%)	Rock comp. (%)	Vol. per meter (m ³)		Total vol. (m ³)		Additional vol. (m ³)		Culvert ø (cm)	Remarks
					Soil	Rock	Soil	Rock	Soil	Rock		
1	3	4	5	6	7	8	9	10	11	12	13	14
1~2	8	20	30	0	1.70	-	34.00	0.00	-	-	-	
2~3	8	20	30	0	1.70	-	34.00	0.00	-	-	-	
3~4	8	20	40	0	2.46	-	49.20	0.00	-	-	-	
4~5	8	20	40	0	2.46	-	49.20	0.00	-	-	-	
5~6	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
6~7	8	20	60	0	6.13	-	122.60	0.00	-	-	-	
7~8	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
8~9	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
9~10	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
10~11	8	20	70	0	10.50	-	210.00	0.00	52.50	-	-	Passing place 1
11~12	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
12~13	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
13~14	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
14~15	8	20	80	100	-	9.64	0.00	192.80	-	-	-	
15~16	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
16~17	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
17~18	8	20	90	25	15.34	3.44	306.80	68.80	-	-	-	
18~19	8	20	50	100	-	2.50	0.00	50.00	-	-	1.00	Hume Pipe @40% side slope
19~20	8	20	90	100	-	13.73	0.00	274.60	-	-	-	
20~21	8	20	80	0	13.50	-	270.00	0.00	67.50	-	-	Passing place 2
21~22	8	20	110	0	30.55	-	611.00	0.00	-	-	-	
22~23	8	20	80	25	10.13	2.41	202.60	48.20	-	-	1.00	Hume Pipe @40% side slope
23~24	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
24~25	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
25~26	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
26~27	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
27~28	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
28~29	8	20	50	0	3.38	-	67.60	0.00	-	-	-	

St. No.	Grad. (%)	Dist. (m)	Side slope (%)	Rock comp. (%)	Vol. per meter (m ³)		Total vol. (m ³)		Additional vol. (m ³)		Culvert ø (cm)	Remarks
					Soil	Rock	Soil	Rock	Soil	Rock		
1	3	4	5	6	7	8	9	10	11	12	13	14
29~30	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
30~31	8	20	50	0	3.38	-	67.60	0.00	16.90	-	-	Passing place 3
31~32	8	20	40	0	2.46	-	49.20	0.00	-	-	-	
32~33	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
33~34	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
34~35	8	20	80	0	13.50	-	270.00	0.00	-	-	1.00	Hume Pipe @30% side slope
35~36	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
36~37	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
37~38	8	20	40	0	2.46	-	49.20	0.00	-	-	-	
38~39	8	20	40	0	2.46	-	49.20	0.00	-	-	-	
39~40	8	20	40	0	2.46	-	49.20	0.00	-	-	-	
40~41	8	20	40	0	2.46	-	49.20	0.00	12.30	-	-	Passing place 4
41~42	8	20	30	0	1.70	-	34.00	0.00	-	-	-	
42~43	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
43~44	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
44~45	8	20	30	0	1.70	-	34.00	0.00	-	-	-	
45~46	8	20	30	0	1.70	-	34.00	0.00	-	-	-	
46~47	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
47~48	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
48~49	8	20	40	0	2.46	-	49.20	0.00	-	-	-	
49~50	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
50~51	8	20	50	0	3.38	-	67.60	0.00	16.90	-	-	Passing place 5
51~52	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
52~53	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
53~54	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
54~55	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
55~56	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
56~57	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
57~58	8	20	60	0	6.13	-	122.60	0.00	-	-	-	
58~59	8	20	30	0	1.70	-	34.00	0.00	-	-	-	
59~60	8	20	60	0	6.13	-	122.60	0.00	-	-	-	
60~61	8	20	80	0	13.50	-	270.00	0.00	67.50	-	-	Passing place 6
61~62	8	20	60	0	6.13	-	122.60	0.00	-	-	-	
62~63	8	20	60	0	6.13	-	122.60	0.00	-	-	-	
63~64	8	20	70	0	10.50	-	210.00	0.00	-	-	-	

St. No.	Grad. (%)	Dist. (m)	Side slope (%)	Rock comp. (%)	Vol. per meter (m ³)		Total vol. (m ³)		Additional vol. (m ³)		Culvert ø (cm)	Remarks
					Soil	Rock	Soil	Rock	Soil	Rock		
1	3	4	5	6	7	8	9	10	11	12	13	14
64~65	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
65~66	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
66~67	8	20	90	0	20.45	-	409.00	0.00	-	-	-	
67~68	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
68~69	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
69~70	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
70~71	8	20	60	0	6.13	-	122.60	0.00	30.65	-	-	Passing place 7
71~72	8	20	90	0	20.45	-	409.00	0.00	-	-	-	
72~73	8	20	90	0	20.45	-	409.00	0.00	-	-	-	
73~74	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
74~75	8	20	50	0	3.38	-	67.60	0.00	-	-	-	
75~76	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
76~77	8	20	90	0	20.45	-	409.00	0.00	-	-	-	
77~78	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
78~79	8	20	60	0	6.13	-	122.60	0.00	-	-	-	
79~80	8	20	90	0	20.45	-	409.00	0.00	-	-	-	
80~81	8	20	90	0	20.45	-	409.00	0.00	102.25	-	-	Passing place
81~82	8	20	90	0	20.45	-	409.00	0.00	-	-	-	
82~83	8	20	70	50	5.25	3.25	105.00	65.00	-	-	1.00	Hume Pipe @40% side slope
83~84	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
84~85	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
85~86	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
86~87	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
87~88	8	20	80	0	13.50	-	270.00	0.00	-	-	-	
88~89	8	20	90	0	20.45	-	409.00	0.00	-	-	-	
89~90	8	20	90	0	20.45	-	409.00	0.00	-	-	-	Passing place 8
90~91	8	20	90	0	20.45	-	409.00	0.00	102.25	-	1.00	Hume Pipe @40% side slope
91~92	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
92~93	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
93~94	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
94~95	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
95~96	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
96~97	8	20	70	0	10.50	-	210.00	0.00	-	-	1.00	Hume Pipe @40% side slope
97~98	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
98~99	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
99~100	8	20	70	0	10.50	-	210.00	0.00	-	-	-	
100~101		20	70	0	10.50	-	210.00	0.00	52.50	-	-	Passing place 9
Total							19,117.60	699.40	521.25	0.00	6.00	
Grand Total		2000					19,638.85	699.40			6.00	

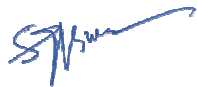
St. No.	Grad. (%)	Dist. (m)	Side slope (%)	Rock comp. (%)	Vol. per meter (m ³)		Total vol. (m ³)		Additional vol. (m ³)		Culvert ø (cm)	Remarks
					Soil	Rock	Soil	Rock	Soil	Rock		
1	3	4	5	6	7	8	9	10	11	12	60	14

ABSTRACT

1. Formation Excavation

Soil	19,638.85	m ³	96.56%
Rock	699.40	m ³	3.44%
Total	20,338.25	m³	100%

2. Road length : 2000.00 m
3. Cross drainages : 6 Nos. H/pipe culvert
4. No. of passing places : 9 Nos.
5. No. of Zigs : 0 Nos.
6. DRM wall : Only required for Hume pipe cu



(Bishal Subba)
Civil Engineer
FRD, HO, NRDCL