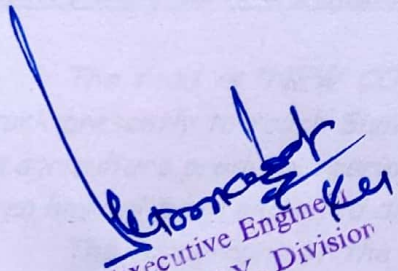


GOVERNMENT OF JAMMU & KASHMIR



PUBLIC WORKS DEPARTMENT
(PMGSY) JAMMU
DETAILED PROJECT REPORT
FOR
CONSTRUCTION OF ROADS PROPOSED
UNDER BHARAT NIRMAN (PMGSY)
DISTRICT-UDHAMPUR

NAME OF SCHEME : Dhar Road (Larey) to Sumal
LENGTH : 3.325 KM
ESTIMATED COST : ~~160.27~~ LACS 105.23 Lacs
PACKAGE NO. : JK 14 - 130
BLOCK : Majalta
NO. OF VILLAGES LINKED : 1
NAME OF THE VILLAGES : ~~Sumal~~ Sumal
POPULATION SERVED : 805 Souls


Executive Engineer
P. I.G.S.Y. Division
Ramnagar

Chief Engineer
PMGSY (JKSRRDA) J&K
Jammu

TECHNICAL REPORT

Name of State : Jammu & Kashmir
District : Udhampur
Block : Majalta
Division : PMGSY Division Udhampur-II Reasi
Name of Scheme : Dhar Road ~~Larey~~ Sumbal
Length : 3.325 km

Preliminary:

India has essentially a rural oriented economy with 74% of its population living in its villages. In the year 2000, it was estimated that about 3,30,000 out of its 8,25,000 villages and habitations were without any all weather road access. It was against this background of poor connectivity that the Prime minister announced a massive rural roads programme under the name "PMGSY" to provide a better connectivity for rural development by way of promoting access to economic and social services there by generating increased agricultural incomes and productive employment opportunities.

Dhar Road km to Sumbal road is one such road which has been proposed to be taken up for construction under PMGSY programme. The road from Dhar Road ~~Larey~~ ~~Sumbal~~ road is proposed to be taken up to connect the village Sumbal having a target population of510..... souls and total population of habitations connected shall be805..... souls.

Authority & Plan Provision:

The road falls in core network of District Udhampur Block Majalta having code JK-14-.....2026..... The proposed road falls at S.No.9..... of CNCPL for Udhampur District and at S.No.196..... of CNCPL of Majalta block.

History Geography & Climate:

The road is "NEW CONSTRUCTION" Project. The people use locally made track presently to reach Sumbal. The people living in the area are mainly dependent on agriculture produce, rearing of cattle live stock production & agriculture etc. the area has not been exploited due to non-availability of proposed motorable link.

The topography of the area is hilly having a cross country slope between 40-70%. At places it is more than 70% also. The terrain thus can be classified as mountainous. The Geological features of the area are combination of hard soil, soft rock & hard rock in stretches.


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P.M.G.S.Y. Division
Ramnagar

The area falls under Sub-Tropical temperature zone by keeping climate and annual rainfall in concern. The ambient temperature ranges between 15° C to 40° C and average annual rainfall is up to 1100mm.

Necessity:

The project envisages the linking of Target habitation of Dhar Road km to Sumbal road. The people of the area have represented for early taking up of this road so that at least all fair weather status road is made available to them. The repeated representations of the public and Hon'ble MLA of the area has necessitated the execution of this project at an earliest.

The road is proposed to be executed for using machinery & labour.

Road features:

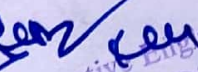
The alignment of the route has been selected keeping in view the fact that maximum benefit reaches the scattered habitations of the village Sumbal and also keeping in view the connectivity criteria for hilly areas. The alignment passes through the safe zone with minimum cross-drainage works. The route has been so selected that heavy cutting are avoided.

The road passes through hilly terrain. The existing nature of soil classification varies in stretches and as such average classification km wise has been fixed. The road has been aligned in such a way that maximum natural passing zones are made available enroute.

Environmental & Ecological Aspect:

While aligning the road it has been tried that minimum forest area/land is encountered.

As the expected traffic to the area after construction of road shall be mainly public transportation with in permissible extent, there is no risk of increase in Air pollution/ Noise pollution in the area. Since no eater sources are being encountered and those available are far from the proposed alignment, hence there shall be no adverse impact on quality of fresh water in the area during the construction process.


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Ramnagar

Construction Programme:

The work is proposed to be executed through Contractors and completion period specification is 12 calendar months for works. The major constraint which may upset this construction schedule is the delay in payment of compensation to the said department by the Govt. which normally takes lot of time.

Miscellaneous:

As the project envisages construction of new road through contractors in two phases, the necessary arrangements for temporary work sheds, water supply etc shall have to be done by the contractor. Regarding road side plantation, turfing for environmental protection, it shall be planned during the taking over of Phase-II of road i.e construction of sub grade & sub base course & wearing surface of the road.

Useful finds:

Any finds such as relics of antiquity coins, fossils or other articles of value shall be promptly delivered to authorized functionary of the J&K Govt. free of cost and shall remain the property of the Government.

Estimated cost:

The total estimated cost of the project shall be Rs. ~~108.37~~ ^{105.23} lacs

105.23 lacs

~~108.37~~ lacs

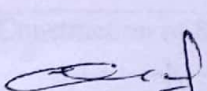
~~160.37~~

Availability of land:

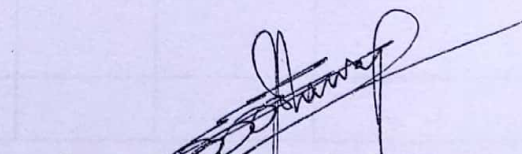
The road alignment passes through pvt. Land, and mainly through forest land. The clearance of Forest Department is required primarily in this scheme the pvt. Land shall be made available by the local panchayat as people have agreed to provide the land for construction of road.

Certificate:

Certified that this road is a constituent of core network and has not been included in any other plan.


Asstt. Ex. Engineer
PMGSY Sub Division
Majalta


Executive Engineer
P.M.G.S.Y. Division
Rampagar


Executive Engineer PMGSY
Udhampur IInd
Reasi

GENERAL ABSTRACT OF COST

Name of road: Construction of road from Dhar Road to Subarnal

Length = 3.325 km

S.No	Particulars	Qty	Unit	Rate	Amount (in Lacs)
1.	E/w in bulk excavation				
	a) In all kinds of soil	10498.50	M ³	100.00	10.49
	b) In ordinary rock	9700.51	M ³	172.00	16.68
	c) In hard rock (require blasting)	4654.68	M ³	276.00	12.85
2.	E/w in filling in foundation trenches:				
	a) Earth available at site	3044.31	M ³	53.00	1.61
	b) Earth carried from borrow pits				
3.	RBM Filling				
4.	Protection works:				
	a) Constt. of R/wall incl. parrapets				
	a. 1M ht. edge wall	115	Mtr	1585.00	1.82
	b. 2M ht. R/wall	-	Mtr	-	-
	c. 3M ht. R/wall	550	Mtr	9010.00	49.55
	d. 4M ht. R/wall	-	Mtr	-	-
	e. 6m ht. R/wall	-	Mtr	-	-
	f. 9.00 ht. R/wall	-	Mtr	-	-
	b) Constt. of B/wall	440	Mtr	5561.00	24.47
5.	Cross Drainage works:				
	a) 1M dia H.P Culvert	10	No	1.43 Lacs	14.30
	b) 6M long scupper	-	No	-	-
	c) 1M span RCC slab culvert	-	No	-	-
	d) 2M span RCC slab culvert	-	No	-	-
	e) 3M span RCC slab culvert	2	No	6.56 lacs	13.12
	f) 6M span RCC slab culvert	1	No	14.77 Lac	14.77
6.	Constt. Of Pucca Drain				
	a) U-Shaped	800	Mtr	898.00	7.18
	b) V-Shaped				
7.	Construction of Steel girder Bridge				


 Executive Engineer
 P.M.G.S.Y. Division
 Ramnagar

8.	Providing and Fixing LOGO of Bharat Nirman project after every 2Km distance	1	No	9342.00	0.09
9.	P/F informatory board every 5 Km distance	1	No	11287.00	0.11
10.	Provision for tracer-path cutting Hilly/Plain terrain & Survey work	3.325	Km	0.35 lacs/km	1.16 0.67
11.	Provision for DPR	1	No	0.06 lacs/mtr	0.06
12.	Citizen board at take off point	1	No	11287.00	0.11
	Total				168.37 lacs

Cost per Km = Rs. 50.64 lacs/km

[Signature]
 Superintending Engineer
 PMGSY Circle Udhampur/Reasi
 Reasi

[Signature]
 Assistant Executive Engineer
 PMGSY Udhampur IInd
 Majalga

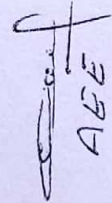
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 Executive Engineer
 PMGSY Udhampur IInd
 Reasi


The sanctioned amount for the project Dhar Road Larey to Sumal is 105.23 lacs sanctioned by Ministry of Rural Development, Government of India as per sanctioned order No: P-17024/10/2009-RC
 Dated 21-04-2010

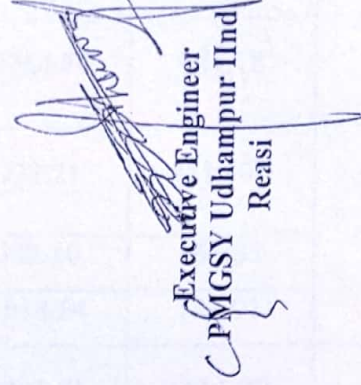
[Signature]
 Executive Engineer
 M.G.S.Y. Division
 Ramnagar

Carriage Chart of Material for Construction of road from Dhar Road to Surbal

S.No	Particular of Item	Unit	Loading (Manually)	Unloading (Mechanical)	Carriage (Haulage Charges)		Total in Rs. (3+4+5+6+7)	Remarks	
					B.T Surface	Unsurfaces/Kachia			
1		3	4	5	6	7	8	9	10
1	Sand from river Nud	Cum	34.00	9.00	23x4.49x1.70=175.55	1x5.49x1.70=9.18	2.75x10.86x1.70=50.77	278.50	
2	Crushed Store agg. (from Krishanpur)	Cum	68.00	9.00	10x4.49x2.00=89.80	x5.49x2.00=	2.75x10.86x2.00=59.73	226.53	
3	Stone Agg. (Nallas) (from Krishanpur)	Cum	68.00	9.00	10x4.49x2.00=89.80	x5.49x2.00=	2.75x10.86x2.00=59.73	226.53	
4	Stone Boulder (from Krishanpur)	Cum	68.00	9.00	10x4.49x1.84=82.62	x5.49x1.84=	2.75x10.86x1.84=54.95	214.57	
5	Stone for R.R.Mary (from Krishanpur)	Cum	68.00	9.00	10x4.49x1.84=82.62	x5.49x1.84=	2.75x10.86x1.84=54.95	214.57	
6	Cement From Jammu	M.T	83.00	83.00	63x4.49=283.00	--	1.75x10.86=19.00	468.00	
7	Steel From Jammu	M.T	88.00	88.00	63x4.49=283.00	--	1.75x10.86=19.00	478.00	

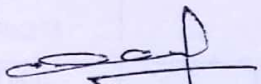

 ABE
 MAJALTA

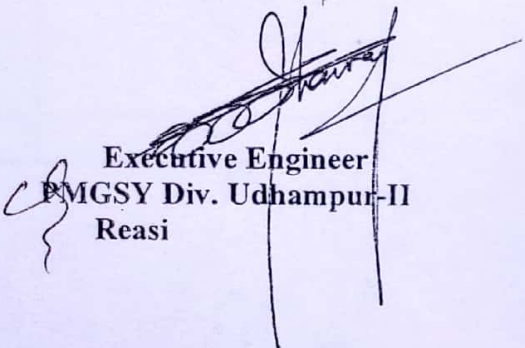

 Executive Engineer
 P.M.G.S.Y. Division
 Ramnagar

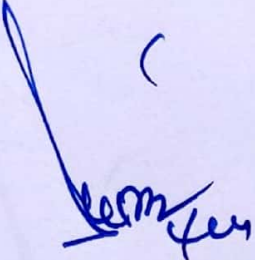

 Executive Engineer
 CPMGSY Udhampur IInd
 Reasi

Dhar Road to ~~Spatial~~
ABSTRACT OF E/WORK

S.No	Location	Total Qty. m ³	H.S m ³	O.R m ³	H.R m ³	E/Filling
1	KM 1 ST RD (0-1000)	9411.875	4705.94	3764.75	941.18	1250.75
2	KM 2 nd RD (0-500)	2407.375	1203.68	722.21	481.475	1043.56
	RD (500-775)	830.25	332.10	332.10	166.05	
	RD (775-1000)	2546.37	763.91	1018.54	763.91	
3	KM 3 rd (0-125)	3704.25	1111.27	1481.71	1111.27	558.75
	(125-1000)	3468.00	1387.20	1387.20	693.60	
4	KM 4 th (0-325)	2486.00	994.40	994.40	497.20	191.25
	Total	24853.69	10498.50	9700.51	4654.68	3044.06

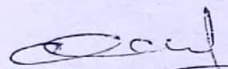

Assistant Executive Engineer
PMGSY Sub. Division
Majalta

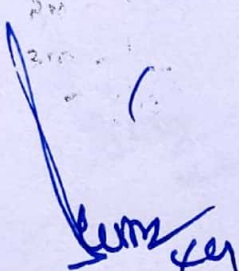

Executive Engineer
PMGSY Div. Udhampur-II
Reasi

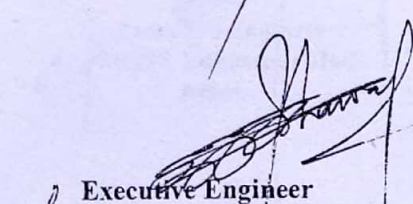

Executive Engineer
P. M.G.S.Y. Division
Ramnagar

Dhar Road km to ^{Surpal}
LOCATION CHART SHOWING C.D. WORKS

Location	H.P Culvert 1000 mm dia	3mtr Span R.C.C Culvert	6 mtr Span R.C.C Culvert
KM 1st			
RD to RD			
275-300	-	1	-
575-600	1	-	-
925-950	1	-	-
KM 2nd			
RD to RD			
75-100	1	-	-
425-450	1	-	-
675-700	1	-	-
875-900	1	-	-
KM 3rd			
RD to RD			
275-300	-	-	1
550-575	1	-	-
825-850	1	-	-
KM 4th			
RD to RD			
50-75	1	-	-
175-200	1	-	-
250-275	-	1	-
Total	10 No	2 No	1 No

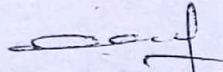

 Assistant Executive Engineer
 PMGSY Sub Division
 Majalta

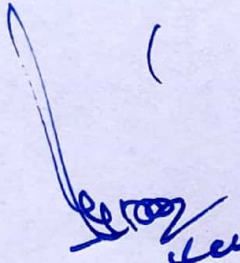
HPC = 11
 2m = 1
 3m = 1
 6m = 1

 Executive Engineer
 P.M.G.S.Y. Division
 Ramnagar

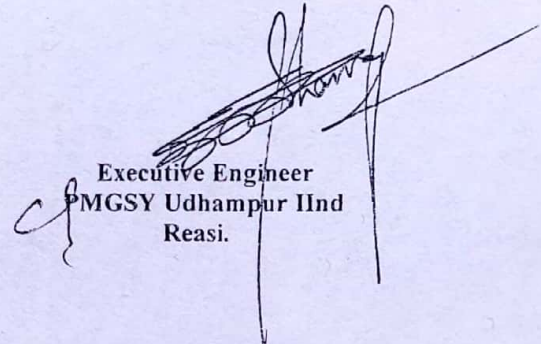

 Executive Engineer
 PMGSY Udhampur IInd
 Reasi.

Dhar Road to *Sunak*
LOCATION CHART OF R/WALLS & B/WALL

S.No	Km	RD	Length of R/Wall 3 mtr	RD	Length of B/Wall 2.55 mtr	RD	Edge wall
1.	1st	0-50	50	150-250	50	50-75	15
		250-300	50	450-500	30	325-350	25
		475-500	30	725-825	100	525-575	15
		850-875	25			950-975	15
		975-100	25				
2.	2nd	0-50	100	800-900	100	250-275	15
		350-375	25				
		650-700	50				
		750-775	20				
3.	3rd	100-250	75	800-825	30	725-775	30
		825-850	75	900-925	50		
4.	4th	200-225	25	0-25	30		
				100-150	50		
Total			550		440		115


Assistant Executive Engineer
PMGSY Sub Division
Majalta


Executive Engineer
P.M.G.S.Y. Division
Ramnagar


Executive Engineer
PMGSY Udhampur IInd
Reasi.

GOVERNMENT OF JAMMU AND KASHMIR



PMGSY DEPARTMENT (J&K)
JAMMU

DETAILED PROJECT REPORT FOR CONSTRUCTION OF
ROADS PROPOSED UNDER
BHARAT NIRMAN (STAGE-II)

IN BLOCK Majalta

DISTRICT UDHAMPUR

Name of the Scheme

DHAR ROAD LAREY TO SUMAL

Length = 3.375 Kms

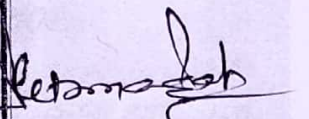
PKG:- JK14-335 L0

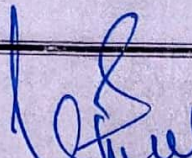
Cost :- Rs. ~~204.55~~ Lacs

~~85.30~~

89.98 lacs

Chief Engineer,
PMGSY (JKRRDA)


Executive Engineer
P.M.G.S.Y. Division
Ramnagar


Assistant Executive Engineer
PMGSY Sub Div. Majalta

Proposal and Specifications:-

Following are the proposal and their specifications:-

1. Water Bound Macadam (WBM) Grade II & III:-
- (a) One layer of WBM-III 75mm thick of crushed or broken stone with grading 63mm to 45mm shall be laid over compacted 100mm thick granular sub base laid over prepared sub grade and shall be compacted with roller (8.0- 10T) capacity @ speed of 5.0 Km/hour.

One layer of WBM III 75mm thick of crushed or broken stone with grading 53mm to 22.4 mm shall be laid with 8.0- 10T) roller, impact value and flakiness index of the material shall be less than 40 and 25 respectively. Water absorption value of the aggregate shall not exceed by 2%.

- (b) Screening:- Screening to fill the voids in the coarse aggregate shall be of the same material that of coarse aggregate. Liquid limit and plasticity index of such material shall be below 20 and 6 and fraction passing 75-micron sieve does not exceed 10%.

For Grading II 63mm to 45mm size (For 100 mm thickness):- Type-B 11.2mm @ $0.20M^3/10M^2$ shall be required.

For Grading III 53mm to 22.4 mm size (For 75mm thickness):- Type-B 11.2mm- 0.12mm @ $0.18M^3/10M^2$ shall be required.


- (c) Binding Material:- Binding material to be used for water bound macadam shall comprise of a suitable material having a plasticity index value of less than 6 for base course and 4 to 10 for surfacing course as determined in accordance with IS: 2720(Part-5). Quantity of material for 100 mm thick compacted thickness of WBM Grade-II @ $0.08M^3 - 0.10M^3 /10M^2$ and for 75mm thick compacted thickness will be $0.06-0.09/M^3/10M^2$.

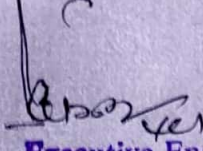
3. Bituminous Construction:-

- (a) Prime Coat:- Prime Coat with Bitumen Emulsion (SS-1) sprayed @ 0.70 -1.00 Kg/M² on prepared surface of granular base using Mechanical means as per Technical specification Clause 502.

- (b) Tack Coat:- Tack Coat with bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25-0.30 Kg/Sqm. On the prepared bituminous surface as per Clause 503.

- (c) 20mm Premix Carpet Using Bitumen Emulsion:- The work shall consist of laying of 20mm thick open graded premix with hot mix plant and rolling with ordinary roller (8.0-10.0 T) using bitumen as binder @ 14.60 Kg/10m² and crushed stone chipping (3.20 mm-5.6 mmsize) @ $0.27 M^3/10M^2$.


Assistant Executive Engineer
PMGSY Sub Div. Majalga

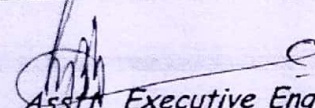

Executive Engineer
P.M.G.S.Y. Division
Ramnagar

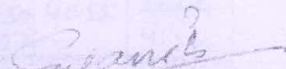
(d) Seal Coat-Type B-The work shall consist of laying of a seal coat for sealing the voids in a bituminous surface laid to specific level, grade and cross falls (camber) using bitumen @ 6.8 Kg/10M² and crushed sand defined as passing 2.36mm sieve and retained on 18 micron sieve applied @0.06 M³ /10 M².

4. CD Works:- 01 No 1.0 Mtr. Dia HP Culverts, 06 Nos 300mm dia MS Pipe for water crossing in paddy fields, RCC flooring of 07 Nos scuppers have been kept in the project as per the necessity at site. The same shall be constructed as per specifications/guidelines provided in SP 20.

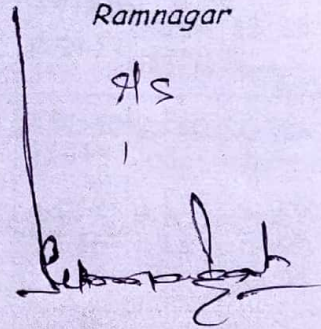
5. Protection Work:- Semi Pucca Retaining Wall and Semi Pucca Breast Wall, Crated Breast Walls and Pucca Drain, wherever necessary and which are not covered in Stage-I shall be constructed to retain the edge of the road and to stabilize the uphill slope and proper disposal of surface water. All these works shall be executed as per typical estimates prepared as per the guideline of SP-20.

Estimated Cost & Time Period: - Cost of the project is Rs. ^{89.98}~~204.55~~
Lacs and shall be completed in one year..


Asstt. Executive Engineer,
PMGSY Sub-Division,
Ramnagar Majalho


Executive Engineer,
PMGSY Division Udhampur-I,
Ramnagar

As



Executive Engineer
P.M.G.S.Y. Division
Ramnagar


Assistant Executive Engineer
PMGSY Sub Div. Majalho

BHARAT NIRMAN (PMGSY)

GENERAL ABSTRACT OF COST

Name of Road: Construction of Road from DHAR ROAD LAREY TO SUMAL (Stage-II)

S.No	Description of Item	Unit	Quantity	Rate (Rs)	Amount (In Lacs)
01	02	03	04	05	06
1	Earth work in excavation in hilly terrain				
a	a) All kind of soil	Cum			
	b) Ordinary Rock not req. blasting	Cum			
	c) Hard Rock	Cum			
	d) Earth filling in embankment	Cum			
2	Pavement :-				
a	Compaction of Original Ground Supporting Sub Grade: 5.425-	Cum			
b	Providing & Laying Gravel Base 200 mm thick.	Cum	1508.71	972.55	14.67
			1845.98		17.95
c	Providing & Laying WBM Grade-II 75 mm thick	Cum	844.44	1284.00	10.84
			1206.97	1283.95	15.50
d	Providing & Laying WBM Grade-III 75 mm thick	Cum	905.22	1956.96	17.71
			844.44	1257.00	10.61
e	Providing & Applying Primer Coat	Sqm.	10972.50	40.52	4.44
			11259.27		4.56
f	Providing & Applying Tack Coat	Sqm.	10972.50	12.19	1.34
			11259.27	12.13	1.36
g	Providing & Laying 20mm thick open graded premix carpet	Sqm.	10972.50	12.90	13.38
			11259.27	123.70	13.92
h	Providing & Laying Seal Coat	Sqm.	10972.50	61.05	6.70
			11259.27	45.05	5.07
3	Making of Earthen Shoulders	Cum	3075.62	239	7.35
			1184.50	226	2.68
4	C.D Works :-				66.99
a	Const. of 1.0 Mtr Dia HP Culvert	No			
b	RCC flooring in 6.00 Mtr long scuppers	No			
c	Const. of 2mtr span RCC Culvert	No			
d	Const. of 3mtr span RCC Culvert	No			
e	Const. of 6 mtr span RCC Culvert	No			
f	Const. of 10 mtr span Bridge	No			
5	Const. of Semi Pucca Walling:-	No			
a	Semi Pucca R/Wall Av. Height 3.0 m	Rmt			
	Semi Pucca R/Wall Av. Height 4.0 m	Rmt			

[Signature]
 Assistant Executive Engineer
 PMGSY Sub Div. Majalga

[Signature]
 Executive Engineer
 P.M.G.S.Y. Division
 Ramnagar

1080, 561, 60 60

Construction of Pucca Drain:-		No	390	1362	5.31
		Rate	880	908	7.99
a	Providing and laying of 100 mm dia MS pipes for water crossing of cultivated lands of land owners for irrigational purpose	Rate			17.13
a	P/F of Citizen Informatory Board	Each	1	11287	0.11
b	P/F of PMGSY Logo after every 2 Km		2	9342	0.18
c	P/F Road Sign Boards @ 3 Nos/Km	Each	10	1392	0.14
d	P/F Kilo Meter Stones Ordinary	Each	4	1423	0.06
e	P/F 200 Mtrs Stones recast	Each	16	364	0.06
f	P/F Boundary Pillars In RCC M-15 @ 100 Mtr C/C	Each			
g	Provision for tracer path cutting including survey and setting out etc.				
h	Provision for DPR preparation				0.10
i	Provision for CBR Tests Including Preparation of DPR & Painting of Boards, Lines, Dashes, Arrows etc. as per Technical Specification Clause 1702.	LS			0.20
Total of Part A :-					155.84 (84.89) Lacs

Part-B Routine Maintenance:					
S.	Year	Cost (In Lacs)		% Cost	Cost Per Km.
a	1st Year	0.51	1.30	0.50% 0.60%	0.890
b	2nd Year	0.76	1.83	0.70% 0.90%	0.550
c	3rd Year	1.02	3.13	+20% 1.20%	0.991
d	4th Year	1.27	3.92	+50% 1.50%	1.170
e	5th Year	1.53	4.44	+70% 1.80%	1.335
Total of Part B:-		5.09	14.62	5.60% 6%	4.896
Grand Total = (Part A + Part B) = (170.46)					
51.26 Lacs					

Asst. Executive Engineer,
PMGSY Sub-Division,
Ramnagar. *Bejalia*

Add 27.234.09 } 204.55
Part A = 84.89
Part B = 5.09
89.98 lacs

Executive Engineer,
PMGSY Division
Ramnagar.

85.30 Lacs
89.98 lacs

CBR : 1500 - 6.4 %
Allowed In. = 225 mm
Gravel base = 150
G.P. = 75
O.P.C. = 1:1:4


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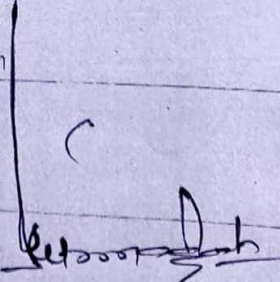
Stage II DPR checked for
Rs. 75.20 lacs
+
M. Cost = 10.10 lacs
Rs. 85.30 lacs

Assistant Executive Engineer
PMGSY Sub Div. Majalta

ESTIMATE FOR THE CONSTRUCTION OF BREAST WALL 2.55 MT. HEIGHT IN
PMGSY Division ~~Chitampur~~ Ramnagar

Sl. No.	Particulars of Items	Amount
	Earthwork in excavation for structures as per drawing and technical specifications clause 305.1 including setting out construction of shoring & bracing, removal of stumps and other deleterious material and disposal up to a lead of 50Mtr. Dressing of sides and bottoms and back filling in trenches with excavated suitable material. Ordinary Soil 70% Ordinary Rock 20% Hard Rock 10% $1 \times 10.0 \times \frac{0.75 \times 1.75}{2} = 6.56 \text{ Cum}$ $1 \times 10.0 \times \frac{(0.75 + 0.88) \times 1}{2} = 8.65 \text{ Cum}$ Drain Edge = $1 \times 10.0 \times \frac{(0.25 \times 0.85) \times 0.82}{2} = 4.51 \text{ Cum}$ T = 19.72 Cum @ 173.50/M ³	3421.00
2	Providing / Laying for Plain /reinforced concrete in open foundation complete as per drawing and technical specifications clause 802,803, 1202 & 1203 PCC grade M-10 grade (1:3:6 nominal mix). $1 \times 10 \times 0.98 \times 0.10 = 0.98 \text{ Cum}$ Drain = $10 \times 0.825 \times 0.10 = 0.825 \text{ Cum}$ T = 1.80 @ 2997/Cum.	5395.00
3	Stone Masonry in cement mortar for sub-structure complete as per drawing and technical specifications clause 702,704, 1202, 1204 in cement mortar 1:6 B Band $1 \times 10 \times \frac{(0.88 + 0.78) \times 0.60}{2} = 4.98 \text{ Cum}$ T Band $1 \times 10 \times \frac{(0.45 + 0.53) \times 0.45}{2} = 2.20 \text{ Cum}$ V Band $4 \times 0.45 \times \frac{(0.78 + 0.53) \times 1.50}{2} = 1.76 \text{ Cum}$ Total = 8.94 Cum @ 2433.70/Cum	21757.00
4	R.P. Masonry laid dry for sub-structure complete as per drawing and technical specifications clause 702,704, 1202 & 1204 $1 \times 10 \times \frac{(0.45 + 0.88) \times 2.55}{2} = 16.95 / \text{Cum}$ Deduct Pacca Masonry vide item (3) = (-) 8.94 Cum Net = 8.01 Cum @ Rs. 1537.75/Cum	12317.00
5	Providing / Laying Plain / reinforced cement concrete in Sub Structure complete as per drawing and technical specifications clause 802,804, 805, 806, 807,1202 & 1204 PCC grade M-20 [1:2:4] Nominal mix $1 \times 10 \times 0.45 \times 0.05 = 0.225 \text{ Cum}$ Drain = $10 \times 0.60 \times 0.05 = 0.30 \text{ Cum}$ T = 0.525 Cum @ 3754.00/Cum	1971.00
6	Providing concrete for plain / reinforced concrete in open foundations complete as per drawings & Technical specifications Clause 802, 803, 1202 & 1203 (P.C.C Grade M-15 Nominal mix 1:2.5:5) Drain Edge : $10.0 \times 0.225 \times 0.60 = 1.35 \text{ Cum}$ @ 3077.00 / Cum	4154.00
	T=	49015.00


 Assistant Executive Engineer
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 P.M.G.S.Y. Division
 Ramnagar

Carriage of material by MT from source to site of work incl. loading/unloading complete a) Carriage of sand Km as per carriage chart Qty. Vide item No. (2) 1.80 Cum @ 0.462 / Cum = 0.78 Cum (3) 8.94 Cum @ 0.35 / Cum = 3.12 Cum (5) 0.525 Cum @ 0.45 / Cum = 0.23 Cum (6) 1.35 Cum @ 0.48 / Cum = 0.64 Cum Total = 4.82 Cum @ 282.42 / Cum		1361/2
b) Carriage of stone agg. for an av. Distance of Km as per carriage chart Qty. Vide item No. (2) 1.80 Cum @ 0.924 / Cum = 1.66 Cum (5) 0.525 Cum @ 0.96 / Cum = 0.50 Cum (6) 1.35 Cum @ 0.90 / cum = 1.21 Cum Total = 3.37 cum @ 256.96 / Cum		866/2
c) Carriage of RR Masonry / Stone as per carriage chart Qty. vide item No. (3) = 3.94 Cum (4) = 8.01 Cum T = 16.95 Cum @ 233.52 / Cum		3958/2
d) Carriage of cement for av. distance of KM as per carriage chart Qty vide item No. (2) 1.80 cum @ 0.250 MT / Cum = 0.465 MT (3) 8.94 Cum @ 0.092 MT / Cum = 0.822 MT (5) 0.525 Cum @ 0.33 MT / Cum = 0.173 MT (6) 1.35 Cum @ 0.275 MT/Cum = 0.371 MT T = 1.831 MT @ Rs. 499.41 / MT		914/2
Total Cost of 10.0 RM Length = Cost per RM = 5611 / RM		= 56,114/2

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 PMGSY Sub-Division
 MAJALTA

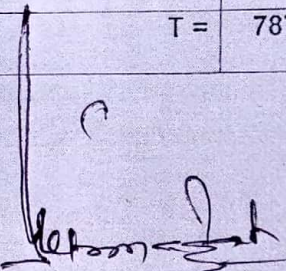
[Signature]
 Executive Engineer
 PMGSY Division
 RAMNAGAR

[Signature]
 Assistant Executive Engineer
 PMGSY Sub Div. Majalta

[Signature]
 Executive Engineer
 P.M.G.S.Y. Division
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Sr. No.	Description	Amount
1.	Earthwork in excavation for structures as per drawing and technical specifications clause 305.1 including setting out construction of shoring & bracing, removal of stumps and other deleterious materials and disposal up to a lead of 50 Mtr. dressing of sides and bottoms and back filling in trenches with excavated suitable material. Ordinary Soil 70%, Ordinary Rock 20%, Hard Rock 10% $1 \times 10.0 \times 0.825 \times 0.55 = 4.53 \text{ M}^3$ D/d $1 \times 10.0 \times 0.60 \times 0.55 = (-) 3.30 \text{ M}^3$ Already included in the earth work = 1.23 M^3 @ 173.50 / M ³	213.00
2.	Providing concrete for plain / reinforced concrete in open foundations complete as per drawing and technical specifications clause 802, 803, 1202 & 1203 P.C.C grade M-10 (1:3:6 nominal mix). Bottom = $10.0 \times 0.825 \times 0.10 = 0.825 \text{ M}^3$ @ 2997.00 / M ³	2472.00
3.	Providing concrete for Plain / reinforced concrete in open foundation completed as per drawing and technical specification clauses 802, 803, 1202 and 1203 P.C.C Grade M15 nominal mix (1:2½ :5) $1 \times 10.0 \times 0.225 \times 0.45 = 1.01 \text{ M}^3$ $1 \times 10.0 \times 0.15 \times 0.45 = 0.675 \text{ M}^3$ T = 1.685 M^3 @ 3077.00 / M ³	5185.00
T =		7870.00


 Assistant Executive Engineer
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 Ramnagar

Carriage of materials by MT from source to site of work incl loading/unloading complete	
a) Carriages of Sand as per carriage chart Qty vide item No (2) $0.825 \times 0.462 = 0.38 \text{ M}^3$ Qty vide item No (3) $1.685 \text{ M}^3 \times 0.48 = 0.80 \text{ M}^3$ $T = 1.18 \text{ M}^3$	@ 282.42 / M^3 333/2
Carriage of stone agg as per carriage chart Qty vide item No (2) $0.825 \times 0.924 = 0.762 \text{ M}^3$ Qty vide item No (3) $1.685 \text{ M}^3 \times 0.80 = 1.348 \text{ M}^3$ $T = 2.11 \text{ M}^3$	@ 256.96 / M^3 542/2
b) Carriage of Cement for an av. distance Km. from Jammu Qty vide item No (2) $0.825 \text{ M}^3 @ 0.250 \text{ MT} / \text{M}^3 = 0.206 \text{ MT}$ Qty vide item No (3) $1.685 \text{ M}^3 \times 0.275 \text{ M}^3 = 0.463 \text{ MT}$ $T = 0.669 \text{ MT}$	@ 499.41 / MT 334/2
Cost of 10.0 M Length = 9079/2	
Cost per one RM Length = 908/RM	

[Signature]
 Assistant Executive Engineer
 PMGSY Sub-Division
 MAJALTA

[Signature]
 Executive Engineer
 PMGSY Division II
 RAMNAGAR

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 a/s
 |
[Signature]

[Signature]
 Assistant Executive Engineer
 PMGSY Sub Div. Majalta

Executive Engineer
P.M.G.S.Y. Division
Ramnagar

... materials for ... layering of ... from ... to ...

Construction of granular sub-base providing well graded material spreading in uniform layers with motor grader or suspended grader moving by min in place method with vibrator at one end compacting with wheel roller to achieve the desired density complete as per technical specification

a) for grading of material

$$1 \times 3325.00 \times 3.30 \times 0.15 = 1371.56 \text{ m}^3$$

Add 10% for curves & passing places = 137.15

$$1508.71 \text{ m}^3$$

@ 608/- = 6,90,752/-

Carriage of material to side of work (as per Carriage Chart)

1508.71 @ 369.56/- = 5,57,558/-

[Signature]
AEE Majalla

14,67,310/-

$$3325 \times 3.5 \times 0.15 \times 10\% = 1920.18 \times 674 = 1294206$$

Carriage 1920.18 x 1121 x 256.95 = 592022

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P.M.G.S.Y. Division
Ramnagar

I. GSB = $1 \times 3325.00 \times 3.30 \times 0.15 = 1645.87 \text{ m}^3$

Passing zones = $1 \times 3.325 \times 3 \times 30.00 \times 2.50 \times 0.15 = 112.21 \text{ m}^3$ = 1758.08 m³

Extra 5% for curves = 1758.08 m³ @ 5% = 87.90 m³

TOTAL = 1845.98 m³

Carriage = 1845.98 @ 369.56/-

@ 603/- = Rs 11,13,125/-
= Rs 6,82,200/-

COST PER m³ = Rs 972.55

TOTAL = Rs 17,95,325/-

[Signature]
Assistant Executive Engineer
PMGSY Sub Div. Majalla

Estimated estimate for providing & laying WBM on Dhar Road from Dhar Road to Sumal

Providing & laying, spreading & compacting stone aggregate of specified size to water bound macadam specification including spreading in uniform layers & packing & rolling with three wheel 80-100 kN roller in stages to proper grade and camber applying & brassy stone screening, binding material to fill up the interstices of coarse aggregate & compacting to required density grading II & III as per technical specifications.

WBM II by mechanical means.

$$1 \times 3325.00 \times 3.30 \times 0.10 = 1097.25 \text{ m}^3$$

$$\text{Add 1\% for curves \& joining places} = \frac{109.72}{1206.97}$$

$$@ 1027 / \text{m}^3 \quad \text{---} \quad 12,39,558 / \text{m}^3$$

$$\text{Carriages (as per chart)} = 1206.97 @ 256.96 / \text{m}^3 \quad \text{---} \quad 3,10,481 / \text{m}^3$$

$$\text{Total} = 15,49,761 / \text{m}^3$$

WBM III by mechanical means.

$$1 \times 3325 \times 3.30 \times 0.075 = 822.93 \text{ m}^3$$

$$\frac{708.125 \times 10\%}{822.93} \rightarrow 8.23$$

$$\text{Add 10\% for curves \& joining places} = 82.29 \text{ m}^3$$

$$905.22 @ 1000 / \text{m}^3 \quad \text{---} \quad 9,05,220 / \text{m}^3$$

$$\text{Carriages (as per chart)} = 905.22 @ 256.96 / \text{m}^3 \quad \text{---} \quad 2,33,66,259 / \text{m}^3$$

$$\text{Total} = 17,71,479 / \text{m}^3$$

Assistant Executive Engineer
PMGSY Sub Div. Majalga
Executive Engineer
P.M.G.S.Y. Division
Ramnagar

$$1196. \times 256.96 = \frac{3.07}{11.30 \text{ km}}$$

3.335 x 2 x 3000 x 2 = 120000
Cost 5% to carrier = 204.22 m³ @ 5%

= 40,214
= 844.44 m³
= 10,827/m³
= 8,67,267/-
= 2,16,987/-
TOTAL = 10,84,227/-

Quantity of material = 844.44 m³ @ 1256.96/m³

COST PER m³ = ₹ 1284.00

2. WBM GR-III

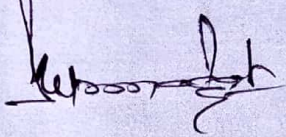
Qty as per WBM GR-III = 844.44 m³
@ 1000/m³ = ₹ 8,44,440/-

Carriage = 844.44 m³ @ 256.96/m³ = ₹ 2,16,987/-

TOTAL = ₹ 10,61,427/-

COST PER m³ = ₹ 1257


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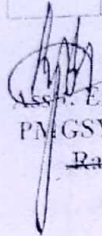

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P.M.G.S.Y. Division
Ramnagar

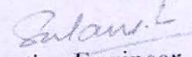
Dhos Road Laxy to Sumal.

JK14-335

Detailed Estimate for Providing & Laying Primer Coat:

1.	Providing and applying priming coat with bitumen emulsion (SS-II) on the prepared surface of granular base including cleaning of road surface & spraying primer @ 0.70-1.0 Kg/Sqm using mechanical means as per Technical Specifications clause 502 (Low Porosity). $1 \times 3325.00 \times 3.00 = 9975.00 \text{ m}^2$ Add 10% for curves & passing places = $\frac{997.50}{10972.50}$	
2.	Carriage of Bitumen by MT from Jammu to site of work including loading/unloading complete for an Av. Distance of Kms. $Qy = 10972.50 @ 1 \text{ kg/m}^2 = 10972.50 \text{ kg}$ $\approx 10.927 \text{ MT}$ $@ 525.41/\text{MT} = 5741/$	$4,38,900/$ $6,5741/$ Total:- $4,44,641/$ Rate per Sqm $\rightarrow 40.52$


 Executive Engineer,
 PMGSY Sub-Division,
 Ramnagar, Majalga


 Executive Engineer,
 PMGSY Division
 Ramnagar

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1 Primer Coat

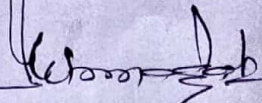
$1 \times 3325.00 \times 3.00 = 9975.00 \text{ m}^2$
 $1 \times 3.325 \times 3 \times 30.00 \times 2.50 = 748.12$
 $5\% \text{ Extra for curves} = 10723.12 \text{ m}^2 @ 5\%$
 $9975.00 \text{ m}^2 + 748.12 = 10723.12 \text{ m}^2$
 $10723.12 \text{ m}^2 @ 5\% = 536.15 \text{ m}^2$
TOTAL = 11259.27 m²

$Qy = 11259.27 \text{ m}^2 @ \text{Rs } 40/\text{m}^2 = \text{Rs } 4,50,370/$

Carriage of bitumen = $11259.27 @ 1 \text{ kg/m}^2$
 $= 11.259 \text{ MT} @ \text{Rs } 525.41/\text{MT} = \text{Rs } 5916/$
 $4,56,286/$

COST PER m² = Rs 40.52


 Assistant Executive Engineer
 PMGSY Sub Div. Majalga


 Executive Engineer
 P.M.G.S.Y. Division
 Ramnagar

the road carry to Surmal

Detailed Estimate for Providing & Laying Tack Coat

1	Providing and applying tack coat Bitumen emulsion (Rs-1) using emulsion distributor at the rate of 0.25 to 0.30 Kg per Sqm on the prepared dry and hungry bituminous surface cleaned with Hydraulic broom as per Technical Specification Clause 503:- Qty as per primer coat = 10972.50 @ 12/- — B. 1,31,670/-
2	Carriage of Bitumen by MT from Jammu to site of work including loading/unloading complete for an Av. Distance of Kms. Qty = 10972.5 @ 0.25 kg/m ² = 4027.73 or 4.027 MT @ 525.41/- — B. 215/-
Total:- 1,33,785/-	
Cost Per Sqm = 12.19/-	

Asst. Executive Engineer,
PMGSY Sub-Division,
Ramnagar. *Devalho*

Saband
Executive Engineer,
PMGSY Division
Ramnagar

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2. TACK COAT

Qty As per Primer coat = 11259.27 m²
@ Rs 12/m² = Rs 1,35,111/-

Carriage of Bitumen = 11259.27 m² @ 0.25 kg/m²
= 2814.81 kg
or 2.814 MT @ Rs 525.41/m² = 1479/-

COST PER M² = Rs 12.13

TOTAL = 1,36,589/-

Devalho
Assistant Executive Engineer
PMGSY Sub Div. Majaila

Saband
Executive Engineer
P.M.G.S.Y. Division
Ramnagar

Ther Road Lany to Sumal

Detailed Estimate for Providing & Laying 20mm Thick Premix Carpet

1	Providing Laying and rolling of open graded premix carpet using 20mm thick composed of 1.2 mm to 5.0mm agg. Either using penetration grade bitumen or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 80-100 KN static roller capacity, finished to required level and grades to be followed by seal coat Type B, as per Technical Specifications clause 508	Qty as per tack coat = 10972.50 m ² @ 116/-	Rs. 1,272,810/-
2	Carriage of Bitumen by MT from Jammu to site of work including loading/unloading complete for an Av. Distance of	Qty = 10972.50 @ 1.46 kg/m ² = 16019.85 kg or 16.019 MT @ 525.41/MT	Rs. 8416/-
		Bajree = 10972.50 @ 0.02 = 219.45 @ 256.96/-	Rs. 56392/-
		Total:-	13,37,618/-
		Cost Per Sqm =	121.90

[Signature]
Asst. Executive Engineer,
PMGSY Sub-Division,
Ramnagar

[Signature]
Executive Engineer,
PMGSY Division
Ramnagar.

1. Premix carpet

Qty as per tack coat = 11259.27 m²
@ Rs 116/m² = Rs 13,06,075/-

2. Carriage

a) Bajree = 11259.27 m² @ 0.027
= 304.00 m³ @ Rs 256.96/m³ = 78,115/-

b) Bitumen = 11259.27 m² @ 1.46 kg/m²
= 16.438 MT @ Rs 525.41/MT = Rs 8637/-

COST PER M² = Rs 123.70

TOTAL = 13,92,827/-

[Signature]
Assistant Executive Engineer
PMGSY Sub Div. Majalga

[Signature]
Executive Engineer
P.M.G.S.Y. Division
Ramnagar

the Road Lorry to Serial

Detailed Estimate for Providing & Laying Seal Coat

1	Providing and Laying Seal Coat - sealing the voids in a bituminous surface laid to the specified levels, graded & cross fall using Type B, as per Technical Specifications clause 510 By Mechanical Means (Type B, Bitumen S-90)	Qty 10972.50 @ 59/-	Rs 6,47,377/2
2	Carriage of Bitumen by MT from Jammu to site of work including loading/unloading complete for an Av. Distance of Kms.	a) Bitumen = 10972.50 @ 0.68 kg/m ² = 7461.30 7.461 @ 525.41/- = Rs. 3920/- b) Sand = 10972.50 @ 0.006 = 65.83 @ 282.42/- = Rs. 18591/-	47217
Total:-			Rs. 6,69,888/-
Cost Per Sqm =			61.05/2

Assst. Executive Engineer,
PMGSY Sub-Division,
Ramnagar.

Executive Engineer,
PMGSY Division
Ramnagar.

Blajelhi

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1. Seal coat

Qty as per Proemir = 11259.27 m²
@ Rs 43/- = Rs 4,84,148/2

2. Carriage

a) Sand = 11259.27 m² @ 0.006
= 67.55 m³ @ Rs 282.42/2 = Rs 19,077/2

b) Bitumen = 11259.27 m² @ 0.68 kg/m²
= 7.656 MT @ Rs 525.41/MT = Rs 4022/2

Total = Rs 5,07,247/2

COST PER m² = Rs 45.05

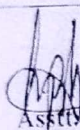
Assistant Executive Engineer
PMGSY Sub Div. Majalla

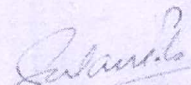
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P.M.G.S.Y. Division
Ramnagar

Shree Road carry to Sumal

Detailed Estimate for Providing & Laying Berm Filling In Earthen Shoulders ~~1000m~~

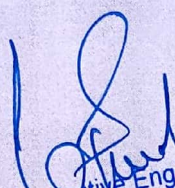
1	Construction of Sub Grade and earthen shoulder/ Berm filling with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table 300.2 with lead up to 1000m as per Technical specification Clause 303.1. Borrow $\sqrt{2} \times 3325.0 \times 1.85 \times \frac{0.30 + 2.0}{2} = 3075.62 \text{ m}^3$ @ Rs 239/m ³	7,35,074/2
	Total Cost:-	7,35,074/2
	Cost per Cum :-	Rs-239/2

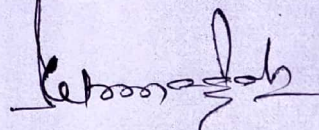

Assistant Executive Engineer,
PMGSY Sub-Division,
Majalta .


Executive Engineer,
PMGSY Division
Ramnagar .

* $3325 \times 1.90 \times \frac{1.25 + 1.15}{2} = 1180.5 \times 2.26$

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Assistant Executive Engineer
PMGSY Sub Div. Majalta


Executive Engineer
P.M.G.S.Y. Division
Ramnagar

Name of the Road: Dhar Road Laxey to Sumal
 Length = 3.325 km Pkg No. = JK14335

P No	Location	B/wall	Draw	Paraphets
1	km - Ist	330	285	130
2	km - Rnd	345	260	105
3	km - 3rd	295	245	125
4	km - 4th	110	90	30
		<u>1080</u>	<u>880</u>	<u>390</u> ¹⁵²⁵
		Rm	Rm	
		<u>180 Rm</u>	<u>400 Rm</u>	

By Mr. C. S. W.

[Signature]

Assistant Executive Engineer
 PMGSY Sub Div. Majalga

Executive Engineer
 P.M.G.S.Y. Division
 Ramnagar