

S.No = 77

**OFFICE OF THE DISTRICT SUPERINTENDING ENGINEER
PWD(R&B) CIRCLE DODA.**

The Chief Engineer
PW(R&B) Department
Jammu.

NO 4807-T4
Dated: 04-08-2009

Sub: Submission of Detailed Project Reports.

Ref: (i) Executive Engineer PWD(R&B) Division Doda's communication No.1718-22-07 Dt:23-07-2009.
(ii) Executive Engineer PWD(R&B) Division Chatroo's communication No.415 Dt:27-07-2009.

Sir,

Kindly find enclosed Detailed Project Reports for below mentioned works along with General Abstract of Costs, Detailed estimates, Drawings, and Technical reports explaining all physical / financial aspects and salient features of the Project in requisite number of copies for favour of further necessary action at your end please.

S.No	Name of the scheme	AA cost
1	Const. and Upgradation of Bharth Keshwan link road km 1 st to 13 th under CRF (4.46 km long Gali)	Rs.1790.00 lacs
2.	Const. and Upgradation of link road from Nagni Keshwan to Ingwan Gali (Barath) under CRF	Rs.2669.00 lacs

The DPRs have been framed by the Executive Engineers concerned as desired by Hon'ble Minister Works J&K State.

It is further reiterated that the proposed roads shall provide alternate inter -District connectivity to Doda and Kishtwar Districts with minimized length besides giving way to exploit the tourism potential in the area which is still unveiled. The proposed roads form parts of one road namely **Bharth Keshwan Nagni road** passing through Ingwan Gali but eastern part of the road i.e **Nagni Keshwan Ingwan Gali** falls under the jurisdiction of R&B Div.Chatroo Administrative control of District Kishtwar and **Bharth Ingwan Gali** falls on western side of **Ingwan Gali** under the jurisdiction of R&B Div.Doda Administrative control of District Doda.

An amount of Rs.200.00 lacs and Rs.400.00 lacs shall be required on account of compensation of sorts which may kindly be arranged from state plan because CRF guidelines restrict such provisions.

It is, therefore, requested that the DPRs may kindly be forwarded to concerned quarters for taking further necessary action.

Yours faithfully,

[Signature]
District Superintending Engineer
PWD(R&B) Circle Doda

Encl:

Copy to the:-

- 1-2 DDC Doda/Kishtwar for favour of information
- 3-4 Executive Engineer PWD(R&B) Division Doda/Chatroo for information. This is in reference to their no referred above.
5. PRO to Hon'ble Minister works J&K State for information of the Hon'ble Minister
6. SO(P&S) Circle office Doda for information.
7. HD Circle Office Doda along with copy of DPR's for record and reference

The District Superintending Engineer,
PWD(R&B) Circle Doda.

No 1718-22

Dated 23/7/09

38/R

Subject;- A.A.A. for construction and Up Gradation of Harth Keshwa
link road Km.1st to 13th under C.R.P.

Reference;- Hon'able Minister for R&B /mech. Engineering Deptt.
J&K State.

Sir,

Kindly find enclosed herewith the application for accord of
administrative approval for the above mentioned scheme amounting to
Rs. ~~1639.90~~ ^{1790.00} lacs in five copies based on detailed estimate/
typical estimates along with general abstract of cost, sub abstracts
earth work charts and index map for favour of further necessary
actions.

The history/necessity and financial implications of the
Scheme stands fully discussed in the technical report. The AAA
has been framed as per the orders of Hon'ble Minister for R&B/
Mech. Engineering department J&K State to be included in ^{CRF} CRF. It is
therefore requested that the AAA may kindly be processed at
the earliest.

End=5 sets.

Yours Faithfully.

Executive Engineer,
PWD(R&B) Spl. Sub- Divn.
Doda.

Copy to the :-

- 01/- Hon'ble Minister for R&B/Mech. Engineering department J&K
State for favour of information please.
- 02/- Hon'ble MLA Doda Sh. Kh. Ab. Majeed Wani for favour of inf. plz
- 03/- Worthy D.D.C Doda for favour of information alongwith copy of
AAA.
- 04/- Asstt. Executive Engineer, PWD(R & B) East Sub-Divn. for inf.

The District Superintending Engineer,
PWD(R&B) Circle Doda.

No 1718-22Dated 23/7/09

38/R

Subject;- A.A.A. for construction and Up Gradation of Harth Keshwa
link road Km. 1st to 13th under C.R.P.

Reference;- Hon'ble Minister for R&B /mech. Engineering Deptt.
J&K State.

Sir,

Kindly find enclosed herewith the application for accord of
administrative approval for the above mentioned scheme amounting to
Rs. ~~20,16,30.90~~ ^{1790.00} lacs in five copies based on detailed estimate/
typical estimate, along with general abstract of cost, sub abstract
earth work charts and index map for favour of further necessary
actions.

The history/necessity and financial implications of the
Scheme stands fully discussed in the technical report. The AAA
has been framed as per the orders of Hon'ble Minister for R&B/
Mech. Engineering department J&K State to be included in ^{CRF} ~~Estt.~~. It is
therefore requested that the AAA may kindly be processed at
the earliest.

End=5 sets.

Yours Faithfully,

Executive Engineer,
PWD(R&B) Spl. Sub-Divn.
Doda.

Copy to the :-

- 01|- Hon'ble Minister for R&B/Mech. Engineering department J&K
State for favour of information please.
- 02|- Hon'ble MLA Doda Sh. Kh. Ab. Majeed Wani for favour of inf. pl.
- 03|- Worthy D.D.C Doda for favour of information alongwith copy of
AAA.
- 04|- Asstt. Executive Engineer, PWD(R & B) East Sub-Divn. for info.

GOVT. OF JAMMU AND KASHMIR

Public Works Department (Roads and Buildings)

Application for Accord of Administrative Approval

For

Construction and upgradation of
BHARATH KESHWAN Link
Road Km 1st to 13th under C.R.F

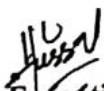
Total road length	=	13 Km
Proposed Length	=	13 Km
Presnet Status	=	New Road
Cost.	=	1790.00 lacs

Chief Engineer,
PW (R&B) Deptt.
Jammu

PROJECT STATISTICS

Name of Project:- Construction and upgradation of Link Road from Bharat to Keshwan upto Ingwan Gali Km 1st to 13th.

1. Length of Road :- 13 Km
2. Cost :- 1790.00 lacs
3. Terrain :- Hilly
4. Right of way :- 10.00Mtrs.
5. Formation width :- 6.00Mtr.
6. Carriageway :- 3.00Mtrs.
7. Pavement thickness
A) Existing :- Nil
B) Proposed :- 250mm thick
8. Time of completion :- 3 years.


Asstt. Executive Engineer,
R&B Sub. Division
East Doda


Executive Engineer,
PWD (R&B) Spl. Sub. Division
Doda.

Technical Report

- Name of the project : Construction and upgradation of BHARATH - KESHWAN ROAD from Km 1st to Km 13th.
- Authority : Letter from Abdul Majid Wani Hon'ble MLA of Doda Constituency vide his No. 862-65 Dated 31-12-07
- History & Necessity : The proposed road shall take off from village Bharat which is situated in Tehsil Doda District Doda. The take off point is 26th Kms away from Doda Town and 32th Kms from NHIB at Pull Doda and about 204 Kms from Jammu. The total proposed length of the road is 13 Kms. The road under reference will benefit directly number of villages viz Bharat, Upper Bharat, Jigwan, Nagni Dhar and Ingwan Dhar, Heala and Thathri Dhar and indirectly the villages falling in the Tehsil of Kishtwar including Tourist Spots. This will be connected to Keshwan Ingwan road falling under PWD (R&B) Div. Chatroo in Tehsil Kishtwar proposed under NABARD, as such providing on alternative rout to synthen Duck Sum road and then to Kashmir valley which shall reduced the earlier distance by about 60 Km from Doda. This road will directly or indirectly benefit a population of about 7000 souls of the area. Who are economically backward because of no road connectivity. The people of the area have no means of livelihood other than agriculture, Horticulture, Poultry, Dairy and forest produces The area is rich in agriculture produce like Maiz Potato's, Beans etc and also in milk and poultry products. The surplus is wasted in absence of road connectivity. It is expected that after construction of this road agricultural

production will increase and will also facilitate convenient transportation of surplus goods to nearby marketing centres/ mandies like Doda City, Pull Doda and even Jammu & Kashmir valley. The road construction will also provide direct employment Skilled/ Unskilled labour thereby boosting the Socio-economic condition of the area. The other social benefits of the project are improvement in health centres. Medicares, school education and other prompt. Govt. sponsored facilities.

As such the above facts necessitated for construction of this road under C.R.F.

Proposals

- : The formations of the road is proposed to be 6.0mt. almost in cutting with extra width at curves and in crossing places, the ruling gradient of the road will be 5%. A hill side drain of the size 0.6×0.6m shall be constructed to cater the surface run off. the back slope in Earth work shall vary from 1:6 to 1:12 as per classification of the strata.

The road is proposed to be upgraded by way of providing and laying WBM G. Ist. 100mm thick, G IInd 75mm, GIIIRD 75mm thick, 20mm thick premixing besides the construction of semi pucca scuppers, 0.90 dia R.C.C hume pipe culverts to drain out surface water during rainy seasons.

Specifications:-

- (a) **Road formation**:- The formation of the road is proposed to be 6.0mtr. almost in cutting with extra width at curves and crossing places. The ruling gradient of the road will be 5%
- (b) **Drainage Crossing**
Minor drainage crossing:-
 - (i) **Semi Pucca Scuppers**:- Shall be constructed with pucca drop walls in 1:3:6 P.C.C. in active cannel portion while as approach walls to be semi pucca. Across fall/.

Longitudinal fall of 1 in 15 is proposed for scuppers. The flooring shall be of 20cm thick squared stone Masonry in 1:6 mix laid over 15cm thick stone concrete in 1:4:8

(ii) 0.90 M dia Hume pipe culverts are proposed with drop walls and curtain walls of C.C 1:3:6 mix and catch pit also of the same specification.

(iii) B/Walls:- Two mt. height semi pucca B/Walls with 0.60m top width 1:3 front batter and 1:6 back batter have been proposed to protect the hill slopes from erosions.

(iv) R/Walls:- 4mt. height semi pucca R./Wall with 0.60m top width with 1:3 front batter have been proposed

© Upgradation:- 100mm thick WBM G.1st shall be provided as base course and 75mm thick each layer of WBM G IInd G. IIIrd.

Premixing:- It is proposed to provide 2cm thick premix carpet with necessary tack coat and seal coat of IRC type B.

(d) Availability of Labour:- The skilled/ unskilled labour is guaranteed throughout the year as the population enroute the proposed alignment and adjoining areas are living below poverty line and dependent on such labour generating development projects.

(E) Time & Cost:- The scheme shall cost of Rs.1790.00 lacs as per General Abstract of cost and take three years for completion subject to availability of funds and early sanction of project.


Asstt. Executive Engineer,
R&B Sub. Division


Executive Engineer,
PWD (R&B) Spl. Sub. Division

BREAK UP OF COST

90.8
368.8

S. NO	Items of work	Cost (in lacs)	Percent of Total Cost.
1.	Earth work	733.56	41%
2.	Drainage crossing (i) Major (ii) Minor	nil 278.72	Nil 15.57
3.	Protection work	430.56	24.05
4.	Pavement	278.00	15.54
5.	Miscellaneous	68.83	3.84
	Total:	1790.00	100.00

[Signature]
Asstt. Executive Engineer,
R&B Sub. Division
East Doda

[Signature]
Executive Engineer,
PWD (R&B) Spl. Sub. Division
Doda.

14-14.8

GENERAL ABSTRACT OF COST

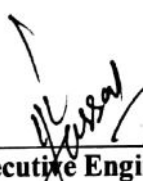
Name of Scheme:- Construction and upgradation of Bharth Keshwan link road from Km 1st to 13th.

S. No	Particulars	Amount (in lacs)
1.	Earth work and walling Km 1 st to 13 th (estimate and charts enclosed)	733.56
2.	Major drainage crossing:	-
3.	Minor Drainage crossing:-	
I.	6.0M span R.C.C culverts @ 1No/Km = 13 Nos @ Rs. 10.09lacs/e	131.17
II	6.0 M long pucca scupper from Km 1 st to 13 th . = 13 Km @ 1 No/Km = 13 Nos @ Rs. 4.29 lacs/ No (As per typical estimate enclosed)	55.77
III	0.90M dia R.C.C hume pipe Culvert @ 4 Nos/Km = 52 Nos @ Rs. 1.44 lacs/ No (As per typical estimate enclosed)	74.88
IV	Pucca side drain in built up areas from Km 1 st to 13 th = 13 Km @ 100mt/Km 1300mt. @ Rs. 1300/Mt. (As per typical estimate enclosed)	16.90
4	Walling	
I	4.0M ht. semi-pucca R/Wall from Km 1 st to 13 th = 13Kms @ 200 M/Km = 2600M @ Rs. 12805/mt. (As per typical estimate enclosed)	332.93
II	2.0M ht. semi pucca B/Wall from Km 1 st to 13 th = 13Kms @ 200M/Km = 2600M @ Rs. 3435/mt As per typical estimate enclosed)	89.31
III	Pucca parapets in built up areas from Km 1 st to 13 th = 13 Kms @ 50 No/Km = 650 Nos @ Rs. 840/No As per typical estimate enclosed)	5.46
IV	Km. stones, R.D. Stones and caution boards from Km 1 st to 13 th = 13 Kms @ Rs. 0.22 lacs/ Km As per typical estimate enclosed)	2.86
5	Upgradation:	
I	Granular Sub base = 8580m ³ @ Rs. 600/m ³	51.48
II.	WBM G. 1 st . 100mm thick from Km 1 st to 13 th = 13 Kms @ Rs. 3300sqm/Km = 42900sqm. @ Rs. 102/sqm. (As per typical estimate enclosed)	43.76

$$CD = 13 + 10 + 52 + = 75$$

$$K = 2600 + 2500 +$$

III	WBM G. 2 nd 75mm thick – 42900Sqm @ Rs. 72/Sqm As per typical estimate enclosed)	30.89
IV	WBM G. 3 rd 75mm thick = 42900 Sqm @ Rs. 83/Sqm As per typical estimate enclosed)	35.61
V	20mm thick premixed carpet = 42900Sqm @ Rs. 271/Sqm As per typical estimate enclosed)	116.26
6	MISECELLANEOUS:-	
	Add 3% for work charge and contingencies @ Rs. 1720.84lacs	51.62
	Add 1% for quality control	17.21
	G. T. Rs.	1789.67
	Say Rs. 1790.00 lacs	

 Asstt. Executive Engineer R&B Sub. Division East Doda.	 Executive Engineer, PWD (R&B) Spl. Sub. Division Doda	Distt. Superintending Engineer PWD (R&B) Circle Doda
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EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 1ST RD (0-1000)
Const. of Bharth Kashwan Road

E/WORK CUTTING						CLASS- FICATION ION WISE QTY.	CLASSIFICATION/ QTY				R.R. MAS. DRY				H.P.S.FILLING			
RD	L	A(M ²)	T.A	M.A	QTY (M ³)		ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY
0	0	16.42	-	-	-	A.K .soil = 40% S.R. = 30% H.R. 30%				250	4.40	4.40	2.20	550.00	0.20	0.20	0.10	25.00
250	250	27.09	43.51	21.75	5438.75													
500	250	57.13	84.22	42.11	10527.50													
750	250	19.43	76.56	38.28	9570.00													
1000	250	17.68	37.11	18.55	4638.75													
				T=	30175.00m ³									550.00				25.00
Add. For passing zone					(+)	1185.00m ³		Add. Ppts 251×2.0×0.60×0.60						180.72				
3 × 25M × 15.80m ²					G. T =	31360.00m ³		12544m ³	9408m ³	9408m ³	9408m ³							
								T = 12544m ³ 9408m ³ 9408m ³										
</																		

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 2nd RD (0-1000)
Const. of Bharth Kashwan Road

E/WORK CUTTING						CLASS- FICATION ION WISE QTY.	CLASSIFICATION/ QTY				R.R. MAS. DRY				H.P.S FILLING			
RD	L	A(M ²)	T.A	M.A	QTY (M ³)		ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY
0	0	17.68	-	-	-				250	4.40	4.40	2.20	550.00	0.50	0.50	0.25	62.50	
250	250	28.29	45.97	22.98	5746.25													
500	250	50.57	78.86	39.43	9857.50													
750	250	21.70	72.27	36.13	9033.75													
1000	250	23.81	45.51	22.75	5688.75													
				T=	30326.25												62.50	
Add. For passing zone					(+)	1185.00		Add. Ppts 251×2.0×0.60×0.60				121.44						
Area 3 × 25M × 15.80m ² G. T =						31511.25m ³		12604.50m ³	9453.37m ³	9453.37m ³				T=731.44m ³				
								T = 12604.50m ³	9453.37m ³	9453.37m ³								

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 3rd RD (0-1000)
Const. of Bharth Kashwan Road

E/WORK CUTTING					CLASSIFICATION/ QTY.	CLASSIFICATION/ QTY			R.R. MAS. DRY					H.P.S FILLING			
RD	L	A(M ²)	T.A	M.A		ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY
0	0	23.81	-	-	-	A.K .soil = 45% S.R. = 30% H.R. 25% T=15757.87m ³ T=10505.25m ³ T=8754.37m ³											
250	250	25.61	49.42	24.71													
500	250	48.61	74.22	37.11			250	4.40	4.40	2.20	550.00						
750	250	39.41	88.02	44.01													
1000	250	19.59	59.00	29.50													
Add. For passing zone																	
								</									

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 4th RD (0-1000)
Const. of Bharth Kashwan Road

E/WORK CUTTING						CLASS- FICATION- ION WISE QTY.	CLASSIFICATION/ QTY			R.R. MAS. DRY					H.P.S.FILLING				
RD	L	A(M ²)	T.A	M.A	QTY (M ³)		ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY	
0	0	19.59	-	-	-														
250	250	36.01	55.60	27.80	6950.00														
500	250	17.61	53.62	26.81	6702.50				250	3.67	3.67	1.835	458.75	0.58	0.58	0.29	72.50		
750	250	38.66	56.27	28.13	7033.75														
1000	250	22.36	61.02	30.51	7627.50														
				T=	28313.75	A.K .soil = 35% S.R. = 30% H.R. 35%	T=10324.56m ³	T=8849.62m ³	T=10324.56m ³										
Add. For passing zone																			
						(+)	1185.00	Add. Ppts 251×2.0×0.60×0.60					458.75					72.50	
3 × 25M × 15.80m ²						G. T =	29498.75m ³						180.72						

RD (0-1000)

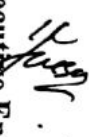
$$\overline{3 \times 25\text{M} \times 15.80\text{m}^2}$$
$$\overline{G.T} =$$
30483.75m³Add. Ppts $252 \times 2.0 \times 0.60 \times 0.60$
$$T=555.72\text{m}^3$$

**Executive Engineer,
PWD (R&B) Spl. Sub. Division
Doda.**

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 6th RD (0-1000)

Const. of Bharth Kashwan Road

E/WORK CUTTING						CLASS- FICATION ION WISE QTY.	CLASSIFICATION/ QTY			R.R. MAS. DRY						H.P.S FILLING					
RD	L	A(M ²)	T.A	M.A	QTY (M ³)		ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY			
0	0	41.73	-	-	-	A.K .soil = 45% S.R. = 25% H.R. 30%	T=12115.66m ³	T=6730.93m ³	T=8077.12m ³												
250	250	29.94	71.67	35.83	8958.75									4.40	4.40	2.20	550.00	0.12	0.12	0.06	15.00
500	250	28.68	58.62	29.31	7327.50																
750	250	17.58	46.26	23.13	5782.50																
1000	250	11.78	29.36	14.68	3670.00																
				T=																	
Add. For passing zone						(+)	1185.00			Add. Ppts 251×2.0×0.60×0.60						180.72					
3 × 25M × 15.80m ²						G. T =	26923.75m ³											T=730.72m ³			


Asstt. Executive Engineer,
R&B Sub. Division
East Doda


Executive Engineer,
PWD (R&B) Spl. Sub. Division
Doda.

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 7th RD (0-1000)
Const. of Bharth Kashwan Road

E/WORK CUTTING						CLASSIFICATION WISE QTY.	CLASSIFICATION/ QTY			R.R. MAS. DRY						H.P.S FILLING						
RD	L	A(M ²)	T.A	M.A	QTY (M ³)		ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY				
0	0	11.78	-	-	-	A.K. soil = 50% S.R. = 25% H.R. 25% T=8900.62m ³ T=4450.31m ³ T=4450.316m ³																
250	250	21.72	32.50	16.25	4062.50																	
500	250	20.80	42.52	21.26	5315.00					250	4.40	4.40	2.20	550.00	2.00	2.00	1.00	250.0				
750	250	10.76	31.56	15.78	3945.00																	
1000	250	15.59	26.35	13.17	3293.75																	
				T=	16616.25													250.0				
Add. For passing zone						(+)	1185.00	Add. Ppts 252×2.0×0.60×0.60											181.44			
3 × 25M × 15.80m ²						G.T = 17801.25m ³						T=731.44m ³										

[Signature]
Asstt. Executive Engineer,
R&B Sub. Division
East Doda

[Signature]
Executive Engineer,
PWD (R&B) Spl. Sub. Division
W. Doda.

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 8th RD (0-1000)
Const. of Bharth Kashwan Road

E/WORK CUTTING						CLASS- FICATION- ION WISE QTY.	CLASSIFICATION/ QTY			R.R. MAS. DRY						H.P.S FILLING					
RD	L	A(M ²)	T.A	M.A	QTY (M ³)		ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY			
0	0	15.59	-	-	-	A.K .soil = 50% S.R. = 30% H.R. 20%	T=13706.87m ³	T=8223.97m ³	T=5482.75m ³												
250	250	14.40	29.99	14.99	3748.75																
500	250	43.97	68.37	34.185	8546.25					250	3.00	3.00	1.50	375.00	0.12	0.12	0.06	15.00			
750	250	18.36	62.33	31.165	7791.25																
1000	250	30.78	49.14	24.57	6142.50																
				T=	26228.75													15.00			
Add. For passing zone									Add. Ppts 252×2.0×0.60×0.60												
3 × 25M × 15.80m ²						G. T = 27413.75m ³						T=556.37m ³									


Asstt. Executive Engineer,
R&B Sub. Division
East Doda


Executive Engineer,
PWD (R&B) Spl. Sub. Division
W. Doda.

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 9th RD (0-1000)
Const. of Bharth Kashwan Road

E/WORK CUTTING						CLASS- FICATION ION WISE QTY.	CLASSIFICATION/ QTY			R.R. MAS. DRY						H.P.S FILLING					
RD	L	A(M ²)	T.A	M.A	QTY (M ³)		ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY			
0	0	30.78	-	-	-	A.K .soil = 55% S.R. = 25% H.R. 20%	T=12755.18m ³	T=5797.81m ³	T=4638.25m ³												
250	250	9.70	40.48	20.24	5060.00																
500	250	20.56	30.26	15.13	3782.50								250	3.70	3.70	1.85	462.50	0.41	0.41	0.205	51.25
750	250	27.32	47.88	23.94	5985.00																
1000	250	30.11	57.43	28.71	7178.75																
				T=	22006.25									462.50				51.25			
Add. For passing zone					(+)		Add. Ppts 251×2.0×0.60×0.60														
3 × 25M × 15.80m ²					G. T =								T=643.22m ³								

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 10th RD (0-1000)
Const. of Bharth Kashwan Road

E/WORK CUTTING						CLASS- FICATION ION WISE QTY.	CLASSIFICATION/ QTY			R.R. MAS. DRY					H.P.S.FILLING				
RD	L	A(M ²)	T.A	M.A	QTY (M ³)	A.K .soil = 50% S.R = 25% H.R. 25%	ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY	
0	0	30.11	-	-	-		T=10659.35m ³		T=5329.68m ³	T=5329.68m ³									
250	250	11.80	41.91	20.955	5238.75														
500	250	31.48	43.28	21.64	5410.00		250	4.40	4.40	2.20	550.00	0.12	0.12	0.06	15.00				
750	250	12.84	43.32	21.66	5415.00														
1000	250	19.72	32.56	16.28	4070.00														
				T=	20133.75									550				15.00	
Add. For passing zone						(+)	1185.00	Add. Ppts 251×2.0×0.60×0.60			180.72								
3 × 25M × 15.80m ²						G. T = 21318.75m ³						T=730.72m ³							


Asstt. Executive Engineer,
R&B Sub. Division
East Doda


Executive Engineer,
PWD (R&B) Spl. Sub. Division
W Doda.

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 11th RD (0-1000)
Const. of Bharth Kashwan Road

E/WORK CUTTING					CLASS- FICAT- ION WISE QTY.	CLASSIFICATION/ QTY			R.R. MAS. DRY					H.P.S FILLING							
RD	L	A(M ²)	T.A	M.A		QTY (M ³)	ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY			
0	0	19.72	-	-	-	A.K .soil = 50% S.R. = 20% H.R. 30%	T=16173.75m ³	T=6469.50m ³	T=9704.25m ³												
250	250	32.58	52.30	26.15	6537.50																
500	250	33.16	65.74	32.87	8217.50								250	4.40	4.40	2.20	550.00	0.84	0.84	0.42	105.0
750	250	58.60	45.88	22.94	5735.00																
1000	250	26.78	85.38	42.69	10672.50																
				T=	31162.50									550.00				105.0			
Add. For passing zone					(+)	1185.00	Add. Ppts. 251×2.0×0.60×0.60					180.72									
3 × 25M × 15.80m ²					G. T =	32347.50m ³	T=730.72m ³														


Asstt. Executive Engineer,
R&B Sub. Division
East Doda


Executive Engineer,
PWD (R&B) Spl. Sub. Division
W. Doda.

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 12th RD (0-1000)
Const. of Bharth Kashwan Road

E/WORK CUTTING						CLASS- FICATION ION WISE QTY.	CLASSIFICATION/ QTY			R.R. MAS. DRY					H.P.S.FILLING						
RD	L	A(M ²)	T.A	M.A	QTY (M ³)		ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY			
0	0	26.78	-	-	-	A.K .soil = 30% S.R. = 30% H.R. 40%	T=9717.37m ³	T=9717.37m ³	T=12956.50m ³												
250	250	30.76	57.54	28.77	7192.50																
500	250	27.51	58.27	29.135	7283.75					250	3.67	3.67	1.835	458.75	0.90	0.90	0.45	112.5			
750	250	36.57	64.08	32.04	8010.00																
1000	250	33.19	69.76	34.88	8720.00																
				T=	31206.25								458.75				112.5				
Add. For passing zone					(+)	1185.00	Add. 251×2.0×0.60×0.60											180.72			
3 × 25M × 15.80m ²						G. T = 32391.25m ³						T=539.47m ³									

Asstt. Executive Engineer,
R&B Sub. Division
East Doda

Executive Engineer,
PWD (R&B) Spl. Sub. Division
Doda.

EARTHWORK AND WALLING CHART FOR CONSTRUCTION OF KM 13th RD (0-1000)

Const. of Bharth Kashwan Road

E/WORK CUTTING					CLASS- FICAT- ION WISE QTY.	CLASSIFICATION/ QTY			R.R. MAS. DRY					H.P.S FILLING			
RD	L	A(M ²)	T.A	M.A		ALL KIND SOILS	S.R.	H.R	L	A	T.A	M.A	QTY	A	T.A	M.A	QTY
0	0	33.19	-	-	-	A.K .soil = 35% S.R. = 30% H.R. 35%	T=10324.56m ³	T=8849.47m ³	T=10324.56m ³								
250	250	25.80	58.99	29.495	7373.75												
500	250	44.35	70.15	35.07	8768.75		250	3.67	3.67	1.835	458.75	0.10	0.10	0.50	12.50		
750	250	14.30	58.65	29.32	7331.25												
1000	250	24.42	38.72	19.36	4840.00												
				T=	28313.75							458.75				12.50	
Add. For passing zone					(+)	1185.00	Add. 251×2.0×0.60×0.60					180.72					
3 × 25M × 15.80m ²					G. T =	29498.75m ³						T=639.47m ³					

E/WORK
T. AREA = 1642 m²

R.O. 0

E/WORK
T. AREA = 27.09 m²

E/WORK
T. AREA = 5713 m²

R.O. 250

R.O. 500

E/WORK
T. AREA = 17.68 m²

E/WORK
T. AREA = 19.43 m²

R.O. 1000

R.O. 750

TYPICAL X-SEC. OF BHARATI
KISHWAN ROAD CH. NO. 157
R.O. (0-1000) SCALE 1 CM = 1 M.

110
JES
NEE

Executive Engineer,
PWD (R&B) Special Division,
DODA.

E/WORK
T. AREA = 17.68 m²

E/WORK
T. AREA = 28.29 m²
R.S. max = 4.40

R.O. $\frac{1}{10}$

R.O. $\frac{1}{250}$

E/WORK
T. AREA = 50.97 m²

E/WORK
T. AREA = 23.81 m²

R.O. $\frac{1}{500}$

R.O. $\frac{1}{1000}$

E/WORK
T. AREA = 21.70 m²

R.O. $\frac{1}{750}$

TYPICAL X-SEC. OF BARTH
KASHMIR ROAD OF Km 2ND
R.O. (0-1000) SCALE 1 CM = 1 MT.

Exec.
N.E.E.
EAST

Executive Engineer,
P.W.D. (R.O.B.) Srinagar Division
4

E/WORK
T. AREA = 23.88 m²

E/WORK
T. AREA = 25.61 m²

↑ R.D. 2/6

↑ R.D. 2/250

E/WORK
T. AREA = 48.61 m²

E/WORK
T. AREA = 39.41 m²

R.S. dyg = 4.40 m²

↑ R.D. 2/500

↑ R.D. 2/750

E/WORK
T. AREA = 19.59 m²

↑ R.D. 2/1000

TYPICAL X-SEC. OF BHAR
KASHWAN ROAD OF KM
3RD R.D (0-1000) SCALE 1 CM = 1 M

10/10/20
AEE

EXECUTIVE
P.W.D. (R & B) Special Sub Division
DODA

E/WORK
T. AREA = 19.59 m^2

E/WORK
T. AREA = 38.66 m^2

R.S. DR. 1 = 3.67 m^2

R.D. 3/0

E/WORK
T. AREA = 36.01 m^2

R.D. 3/150

R.D. 3/250

E/WORK
T. AREA = 22.36 m^2

R.D. 3/1000

E/WORK
T. AREA = 17.61 m^2

R.D. 3/500

TYPICAL X-SEC- OF BHARTH
KASHWAN ROAD OF KM
4TH R.D(0-1000) SCALE-1 CM=1 MT.

ML
JMS
REE

Executive Engineer,
PWD (R&B) Special Sub Division,
DODA.

E/WORK
T-AREA = 22.36 M²

R.D. $\frac{4}{0}$ ↑

E/WORK
T-AREA = 38.70

R.D. $\frac{4}{500}$ ↑

E/WORK
T-AREA = 20.90 M²
R.S. dsy 3.00 M²

R.D. $\frac{4}{500}$ ↑

E/WORK
T-AREA = 22.55 M²

R.D. $\frac{4}{750}$ ↑

E/WORK
T-AREA = 41.73 M³

R.D. $\frac{4}{1000}$ ↑

TRIPICAL X SEC. OF BHARTH
KASHWAN ROAD OF KM 5TH
R.D (0-1000) SCALE-1CM=1MT

11/11/52
AEE

Executive Engineer,
P.W.D. (R & B), Special Sub Division
DODA

E/WORK
T. AREA = 41.33

E/WORK
T. AREA = 17.58M²

R.D. $\frac{5}{750}$

R.D. $\frac{5}{0}$

E/WORK
T. AREA = 29.94M²
R.S. Dry = 4.40M²

E/WORK
T. AREA = 11.78M²

R.D. $\frac{5}{1000}$

R.D. $\frac{5}{250}$

E/WORK
T. AREA = 28.68M²

TYPICAL X SEC. OF EARTH
KASHWAN ROAD OF KM 6TH
R.D (0-1000) SCALE 1CM = 1MT

R.D. $\frac{5}{500}$

W
AEE

Executive Engineer,
PWD (R & P) Special Sub Division,
W DODIA XEN

E/WORK
T-AREA = 11.98 M²

R.D. - $\frac{6}{0}$

E/WORK
T-AREA = 10.76 M²

R.D. $\frac{6}{750}$

E/WORK
T-AREA = 21.72 M²

R.D. - $\frac{6}{250}$

E/WORK
T-AREA = 15.59 M²

R.D. $\frac{6}{1000}$

E/WORK
T-AREA = 20.80 M²
R.S. DRY = 4.40 M²

R.D. - $\frac{6}{500}$

TYPICAL X-SEC. OF
BHARTH KASHWAN ROAD
OF KM 7TH RD(0-1000)

SCALE: 1 CM = 1 M

12
JUN 2017
AEE
FAST

Executive Engineer
P.W.D. (R&B) Special Sub Division
W. DODA

E/WORK
T.AREA = 15.59 m²

E/WORK
T.AREA = 18.36 m²

R.D. 7/0

R.D. 7/750

E/WORK
T.AREA = 14.40 m²
R.SDRY = 3.0 m²

E/WORK
T.AREA = 30.78 m²

R.D. 7/250

R.D. 7/1000

E/WORK
T.AREA = 43.97 m²

R.D. 7/500

TYPICAL X-SEC. OF BHARTH
KNSHWAN ROAD OF K.M
8TH RD(0-1000) SCALE 1CM = 1M.

HC
JEE
EAST

Executive Engineer,
PWD (R&B) Special Division
W. DODA.

E/WORK
T. AREA = 30.78 m^2

E/WORK
T. AREA = 27.32 m^2

R.D. $8/0$

R.D. $8/750$

E/WORK
T. AREA = 30.11 m^2

E/WORK
T. AREA = 9.70 m^2

R.D. $8/250$

R.D. $8/1000$

E/WORK
T. AREA = 20.56 m^2

R.D. $8/500$

TYPICAL X-SEC. OF BHARTH
KASHWAN ROAD OF KM
9TH RD (0-1000) SCALE: 1 CM = 1 MT.

[Signature]
AEE

Executive Engineer
PWD (R&E) Srinagar
W. DODA

E/WORK
T. AREA = 30.11 m^2

E/WORK
T. AREA = 11.80 m^2
R.S. DRY = 4.40 m^2

R.D. 9/0

R.D. 9/250

E/WORK
T. AREA = 31.48 m^2

E/WORK
T. AREA = 19.72 m^2

R.D. 9/500

R.D. 9/1000

E/WORK
T. AREA = 12.84 m^2

R.D. 9/750

TYPICAL X-SEC. OF BHARTH
KASHWAN ROAD OF KM
10TH RD(0-1000) SCALE = 1 CM = 1 MT.

W. S. E

Executive Engineer,
PWD (R&E) Special Sub Division,
DODA.

E/WORK
T. AREA = 19.72 m^2

E/WORK
T. AREA = 58.60 m^2

R.D $\frac{10}{0}$

E/WORK
T. AREA = 32.58 m^2

R.D $\frac{10}{750}$

R.D $\frac{10}{250}$

E/WORK
T. AREA = 26.78 m^2

E/WORK
T. AREA = 33.16 m^2

R.S. DRY = 4.40 m^2

R.D $\frac{10}{1000}$

R.D $\frac{10}{500}$

TYPICAL X-SEC OF BHARTH
KASHWAN ROAD OF KM
WITH R.D (0-1000) SCALE - 1 CM = 1 MTR.

10/10/17
AEE

Executive Engineer,
PWD (R&B) Sub Division
BODA

E/WORK
T. AREA = 26.78 m²

R.O 1/0 ↑

E/WORK
T. AREA = 30.76 m²
R.S. WRY = 3.69 m²

R.O 1/250 ↑

E/WORK
T. AREA = 27.51 m²

R.O 1/500 ↑

E/WORK
T. AREA = 36.57 m²

R.O 1/750 ↑

R.O 1/1000 ↑

TYPICAL X-SEC OF BHARTH
KASHWAN ROAD OF KM1
12TH RD(0-1000) SCALE: 1 CM = 1 MT

W
REE

Executive Engineer
P.W.D. (R&B) Sub Division
DODA.

Area at (RD)

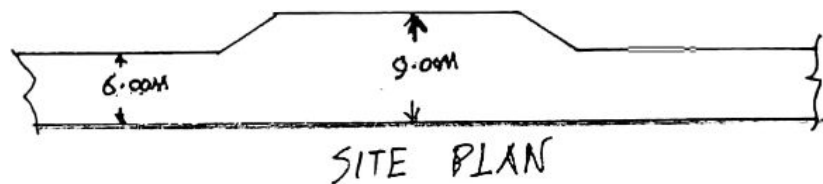
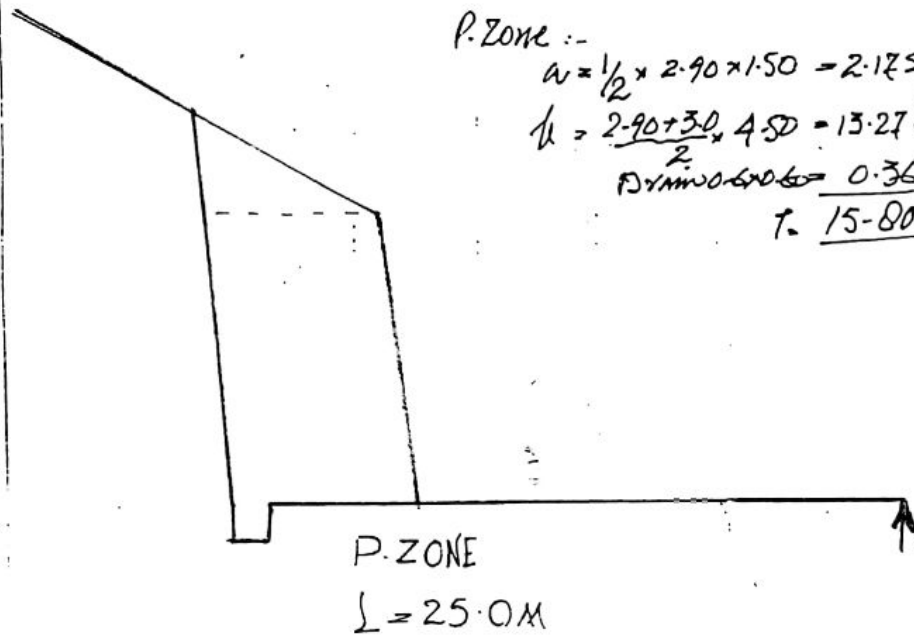
P. Zone :-

$$A = \frac{1}{2} \times 2.90 \times 1.50 = 2.175 \text{ sqm}$$

$$U = \frac{2.90 + 3.0}{2} \times 4.50 = 13.27$$

$$D = \frac{13.27}{15.00} = 0.88$$

$$T = 15.00$$



TYPICAL CROSS-SECTION
FOR CONST. OF PASSING
ZONE ON

ROAD

SCALE 1:100

Asstt. Executive Engineer
PWD (R&B) West Sub-Div.
DODA

Executive Engineer,
Special Sub Div.
DODA

TYPICAL ESTIMATE FOR CONSTRUCTION OF 6.0 MTR SPAN RCC CULVERT

S. No	Description of Items	Amount in Rupees
1	Earth work in excavation over areas (exceeding 30cm in depth, 1.5m in width as well as 10sqm. on plan) incl. disposal of excavated earth and lift upto 1.5m, disposed earth to be leveled and neatly dressed. For a lead of 25Mtrs 50% all kinds of soil, 30% ordinary rock, 20% Hard rock. Culvert $1 \times (15 + 13.2) / 2 \times 2.15 \times 7.0 = 212.20 \text{ cum}$ Approach wall $1/2 \times 2.3 \times 1 = 1.15 \text{ Sqm}$ $(2.3 + 3.1) / 2 \times 0.3 = 0.81 \text{ Sqm}$ $(3.1 + 2.6) / 2 \times 0.3 = 0.85 \text{ Sqm}$ $2.81 \times 4 \times 2 = 22.48 \text{ cum}$ $T = 237.49 @ \text{Rs.} 119.10 / \text{cum}$	28285.00
2	Providing and laying cement conc. 1:5:10 (1 cement: 5 Coarse sand 10 stone aggregate) 40 mm size of stone aggregate: Abutment $1 \times 5.3 \times 6.70 \times 0.15 = 5.32 \text{ cum}$ Approach wall $2 \times 2.6 \times 4 \times 0.15 = 3.12 \text{ Cum}$ Bed $1 \times 3.4 \times 6.770 \times 0.2 = 4.55 \text{ cum}$ $T = 12.99 \text{ cum @ Rs.} 1057.45 / \text{cum}$	13736.00
3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering, all work upto plinth level for 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm. nominal size) $1 \times 3.4 \times 0.15 \times 6.70 = 3.42 \text{ cum @ Rs.} 1857.15 / \text{cum}$	6351.00
4	Squared masonry in cement 1:4 mix. Abutment: $2 \times 0.4 \times 6.00 \times 0.225 = 1.08 \text{ cum}$ $2 \times 0.4 \times 6.00 \times 0.225 = 1.08 \text{ cum}$ $2 \times 2 \times 4.5 \times 0.225 \times 0.4 = 1.62 \text{ cum}$ Sides $2 \times 2 \times (4.1 + 4.5) / 2 \times 0.4 \times 0.225 = 1.58 \text{ cum}$ $2 \times 6.0 \times 3.5 \times 0.225 = 9.45$ $2 \times 2 \times (1.5 + 3.1) / 2 \times 3.5 \times 0.225 = 7.24$ R/wall $(2.4 + 1) / 2 \times 5.8 \times 0.225 \times 2 \times 2 = 8.87 \text{ cum}$ $\text{Total} = 30.88 \text{ cum @ Rs.} 1262.25 / \text{cum}$	38978.00
5	Random Rubble Masonry with Nallah stone in foundation and plinth including leveling up 1:6:12/ (1: cement, 6: coarse sand, 12: stone aggr. 20mm nominal size) with cement mortar 1:6 (1 cement, 6 coarse sand) Abutment $2 \times 6.70 \times 5.5 \times 0.2 = 14.20 \text{ cum}$ $2 \times 6.4 \times 4.9 \times 0.2 = 12.54 \text{ cum}$ $2 \times 6.0 \times 4.5 \times 0.4 = 21.60 \text{ cum}$ $2 \times (4.1 + 4.5) / 2 \times 0.4 \times 6.0 = 20.64 \text{ cum}$ R/wall $2 \times 2 \times (0.6 + 3) / 2 \times 5.5 \times 9.1 + 2.4 / 2 = 61.20 \text{ cum}$ $2 \times (1 + 3.1) / 2 \times 3.5 \times 6.00 = 86.10 \text{ cum}$	

T = 87350.00

Pr 07350-n

	Approach wall $B.B = (2.3 + 2.6) / 2 \times 0.6 \times 4 \times 2 = 11.76 \text{ cum}$ $T.B = (0.6 + 0.9) / 2 \times 0.6 \times 4 \times 2 = 3.6 \text{ cum}$ $V.B = (0.9 + 2.3) / 2 \times 0.6 \times 2.8 \times 2 = 5.37 \text{ cum}$ $\text{Total} = 237.01 \text{ cum}$ D/d square masonry as per item 4 = 22.05 cum $\text{Net} = 221.12 \text{ cum @ Rs. } 1059.35/\text{m}^3$	234213-n
6	Polygonal Random Rubble Masonry Nallah Stones laid dry in foundation and plinth. Approach $(0.9 + 2.3) / 2 \times 2.8 \times 2.8 \times 2 = 25.08 \text{ cum @ Rs. } 388.45/\text{cum}$	9742-n
7	Hand packed filling of stones. <i>(using available stones)</i> $(2 \times (2.4 + 1) / 2 \times 5.5 \times (8.8 + 4) / 2 = 59.84 \text{ cum}$ Approach $1.2 \times 1.5 \times 2 \times 4 \times 2 = 12 \text{ cum}$ $T = 71.74 @ \text{Rs. } 32.15/\text{cum}$	2309.00
8	Reinforced cement conc. work in slab upto floor 5 level excl. cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggr. 20mm nominal size) RCC cap $2 \times 0.5 \times 0.5 \times 6.0 = 3.00 \text{ cum}$ Slab $1 \times 7 \times 6.00 \times 0.225 = 9.45 \text{ cum}$ Wheel guard $2 \times (0.2 + 0.3) / 2 \times 0.3 \times 6 = 0.9 \text{ cum}$ D/wall $2 \times (0.3 + 0.5) / 2 \times 0.95 \times 6.0 = 4.56 \text{ cum}$ $T = 17.91 \text{ cum @ Rs. } 2444.40/\text{cum}$	43779.00
9	Reinforcement for RCC work incl. straightening, cutting, bending, placing in position and binding all completed. Cold twisted bars. As per item no.8 = 17.91 cum @ 125/kg per cum = 2239 kg @ Rs. 24.65/kg	55191.00
10	Centering & shuttering incl. strutting, propping etc and removal of form for suspended floors $1 \times 6 \times 6.0 = 36.00 \text{ sqm @ Rs. } 105.75/\text{Sqm}$ Edges of slab above 20 cm wide Sides of slab = $2 \times 6.0 \times 0.45 = 5.40 \text{ Sqm}$ $2 \times 6 \times 0.45 = 5.4 \text{ Sqm}$ D/Wall $2 \times 2 \times 6.0 \times 0.95 = 22.80$ Sides $2 \times 2 \times 0.6 \times 0.4 = 1.52$ Wheel guards $2 \times 2 \times 6 \times 0.3 = 7.2$ RCC cap $2 \times 6.0 \times 0.5 = 3.00$ Sides $2 \times 2 \times 0.5 \times 0.5 = 1.0$ $\text{Total} = 4576 \text{ sqm @ Rs. } 152.70/\text{Sqm}$	380.00 6987.00
11	Carriage of material: Crushed bajree Aggregate 20 mm size, 76' K.M by MT Qty. vide item No: 3 = 3.42 @ 0.89 = 3.04 cum Qty. vide item No: 8 = 17.91 @ 0.85 = 15.22 cum $\text{Total} = 18.26 \text{ cum @ Rs. } 326.15/\text{m}^3$	5955-n

Pr 449363-n

B.F-1. 1449363

12	Carriage of Sand av. dist. ⁵⁴ K.M by MT. Qty. vide item No:2= 12.99 cum @ 0.47= 6.10 cum Qty. vide item No:3= 3.42 cum @ 0.45= 1.54 cum Qty. vide item No:4= 30.90 cum @ 0.32= 9.88 cum Qty. vide item No:5= 221.12 cum @ 0.38= 84.02 cum Qty. vide item No:8= 17.91 cum @ 0.43= 7.70 cum Total = 109.24 cum @ Rs. 255.75/cum	27930-1
13	Carriage of Stone av. distance 6 K. M by M.T.: (a) 40mm aggr. Qty. vide item No 2= 12.99 cum @ 0.89= 11.56 cum @ Rs. 87.00/cum (b) Stones Qty. vide item No:4= 30.88 cum Qty. vide item No:5= 221.12 cum Qty. vide item No:6= 250.00 cum Qty. vide item No:7= - cum Total = 277.00 cum @ Rs. 94.65/cum	1006.00 26226-1
Total		564533-1
Add 100% above		564533-1
Grand Total		1009066-1

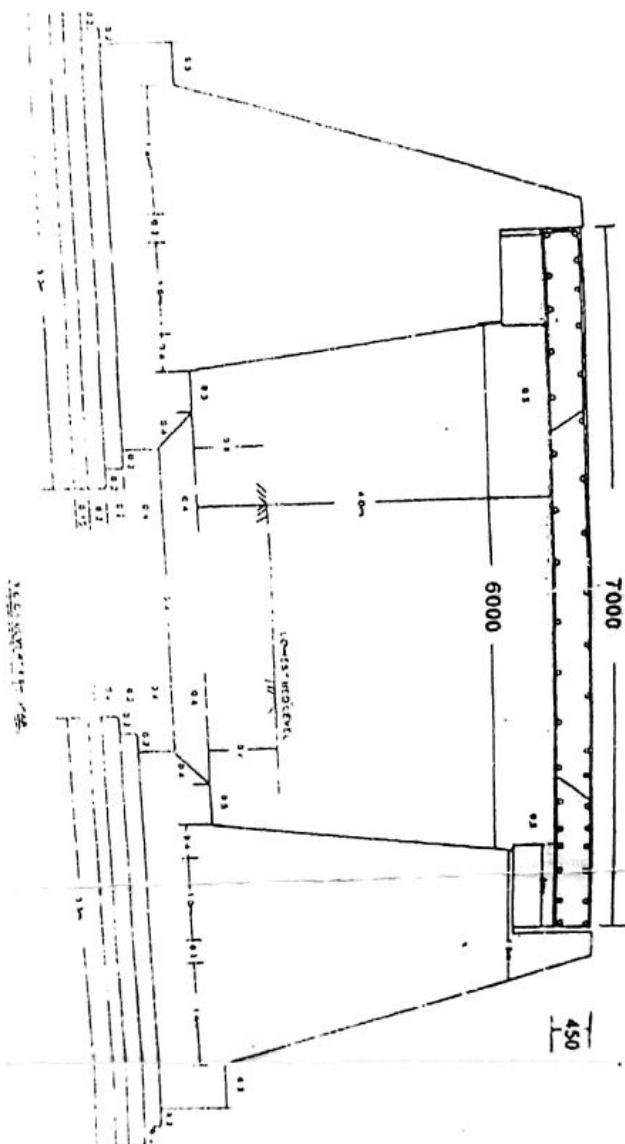
Say Rs. 10.09 Lakhs

Ref.to source:

- | | |
|--------------------|-------------------------|
| 1. Crushed Bajree: | Ramgarh on BKNHIB road. |
| 2. Stone Agg. | Local ravines |
| 3. Stone | -do- |
| 4. Sand | Premnagar |

Handwritten signature


 Executive Engineer,
 PWD (R&B) Section Sub Division,
 W. A. DODA.



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- NOTES
1. ABUTMENT AND PIER WALL SECTIONS ARE APPROXIMATELY A SQUARE SHAPED CAPACITY OF 700 SQ. M. OF 10.5 M. OF SOIL HAVING LOWER BEARING CAPACITY THE SECTIONS SHOULD BE REINFORCED SUFFICIENTLY.
 2. ABUTMENT AND PIER WALL SECTIONS FOR APPROXIMATELY 1000 TO BE ADAPTED SUFFICIENTLY.
 3. THE VARIOUS DIMENSIONS TO BE SUFFICIENTLY ADAPTED TO THE SIZE OF STONE.
 4. THE FOUNDATION AND APPROXIMATELY 1000 TO BE ADAPTED TO THE SIZE OF STONE.
 5. THE SECTIONS SHOULD BE REINFORCED SUFFICIENTLY TO BE ADAPTED TO THE SIZE OF STONE.
 6. THE SECTIONS SHOULD BE REINFORCED SUFFICIENTLY TO BE ADAPTED TO THE SIZE OF STONE.
 7. THE SECTIONS SHOULD BE REINFORCED SUFFICIENTLY TO BE ADAPTED TO THE SIZE OF STONE.
 8. THE SECTIONS SHOULD BE REINFORCED SUFFICIENTLY TO BE ADAPTED TO THE SIZE OF STONE.
 9. THE SECTIONS SHOULD BE REINFORCED SUFFICIENTLY TO BE ADAPTED TO THE SIZE OF STONE.
 10. THE SECTIONS SHOULD BE REINFORCED SUFFICIENTLY TO BE ADAPTED TO THE SIZE OF STONE.

RCC CULVERT 5 M SPAN

Executive Engineer,
P.W.D. (R & B) S. Civil Sub Division,
DODA.

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TYPICAL ESTIMATE FOR CONSTRUCTION OF 6.0 M LONG P.U.C.C.A SCUPPER.

S no	Particulars of items	
1	Earth work in excavation in foundation or drains (not exceeding 1.5m in width as well as 10sqm. plan) incl. dressing of sides and ramming of bottom, lift upto 1.5m, incl. getting out the excavated soil as directed from cutting edge. D/Wall $1 \times 6.00 \times 2.25 \times (2.40 + 1.40) / 2$ = 25.65 cum. C/Wall $1 \times 7.00 \times 1.30 \times (1.65 + 1.80) / 2$ = 11.14 cum. Approach wall $2 \times 4.00 \times 1.55 \times (1.40 + 0.55) / 2$ = 12.09 cum. Wall adjoining curtain wall $2 \times 4.00 \times 0.75 \times 0.75$ = 4.50 cum. End walls $2 \times 8.80 \times 0.75 \times 0.75$ = 9.90 cum. 63.28 cum. @ Rs.82.35/cum 5214.00	
2	Providing and laying in position cement concrete of 1:5:10 stone Agg. 40mm nominal size with nallah stone agg. D/wall $1 \times 6.00 \times 2.25 \times 0.15$ = 2.02 cum. C/wall $1 \times 7.00 \times 1.30 \times 0.15$ = 1.36 cum. Approach wall $2 \times 4.00 \times 0.75 \times 0.15$ = 1.86 cum. Wall adjoining curtain wall $2 \times 4.00 \times 0.75 \times 0.75$ = 0.90 cum. End walls $2 \times 8.80 \times 0.75 \times 0.75$ = 9.09 cum. Flooring Below $8.80 \times (7.0 + 6.0) / 2 \times 0.15$ = 8.58 cum. 24.62 cum. @ Rs.1049/cum 25821.00	
3	Providing and laying in position cement concrete of 1:5:6 with 20% plum in retaining walls, return walls (any thickness) incl. attached plaster, columns, piers, abutments, pillars, posts, buttresses, etc upto floor fine level excluding the cost of centering, shuttering, finishing (crusher Bajree). D/wall $1 \times 6.00 \times 1.95 \times 0.60 / 2 \times 3.50$ = 29.45 cum. C/wall $1 \times 7.00 \times 1.00 \times 0.60 / 2 \times 0.85$ = 7.76 cum. Approach wall $2 \times 4.00 \times 0.75 \times 0.15$ = 4.75 cum. Wall adjoining curtain wall $2 \times 4.00 \times (1.25 + 1.14) / 2 \times 0.45$ = 4.30 cum. Top Band $2 \times 4.00 \times (0.71 + 0.66) / 2 \times 0.45$ = 2.35 cum. C/Wall along Walls $2 \times 4.00 \times 0.60 \times 0.60$ = 2.88 cum. Vertical Band A/walls $2 \times 0.60 \times (1.14 + 0.71) / 2 \times 1.60$ = 1.77 cum. 53.26 cum. @ Rs. 1203.63 cum 64087.00	
4	Centering and shuttering incl. strutting, propping etc. and removal of form work for retaining walls, return walls, (any thickness) including attached pilasters, buttresses, plinth and string course etc.	

	D/Wall 1x6.00x3.85	=46.20 sqm.	
	C/Wall 1x7.00x0.85	=11.90 sqm.	
	End walls : 2x8.8x0.45	=7.92 sqm.	
	Approach wall B.Band 2x2x4.00x0.45	=7.20 sqm.	
	Top Band 2x2x4.00x0.45	=7.20 sqm.	
	Vertical Band: 2x2x0.60x0.60	=3.84 sqm.	
	C/wall along walls 2x2x0.60x0.60	=1.44 Sqm.	
		85.70 Sqm.	
		@ Rs.109.15/sqm.	
5	Polygonal/random Rubble Masonry nallah stone laid in dry in foundation and plinth using nallah stones with bond stones.		
	4x1.55x(1.14+0.71)/2x1.60	= 9.17 cum	
		@ Rs. 543.95 cum	
6	Hand Packing stones including supply		
	1x8.8(6.0+7)x0.15	=8.58 cum.	
	2		
		@ Rs. 132.15/cum	
7	Hand Pack stones in wire crates including cost of stones.		
	1x6.00x1.20x1.20	=8.64 cum.	
		@ Rs.151.80/cum	
8	Providing and laying in position cement concrete 1:2:4 With nallah stones nominal size max size of stone agg. 20mm.		
	Flooring : (7.00+6.00)/2x10.0x0.15	=9.75 cum	
	Approach walls: 2x4.00x0.60x0.05	=0.24 cum	
	Works along C/wall: 2x4.00x0.60x0.05	=0.24 cum	
		10.23 cum	
		@ Rs. 1828.75/cum.	
9	Form work of edges of slabs and walls.		
	D/Walls 2x4x6.0	=48.00 sqm.	
	2x(06+2.25)x4.0	=11.4 sqm.	
	C/wall 2x2x7.00	=28.0 sqm.	
	2x0.60+1.30x2.0	=3.8 sqm.	
	2		
	B/Band 2x8x0.45	=7.2 sqm.	
	2x1.3x0.15	=0.39 sqm.	
	Top/Band 2x8x0.45	=7.2 sqm.	
	2x0.45x0.6	=0.54 sqm.	
	V Pillars 4x2x3.50x0.45	=12.6 sqm.	
	4x2x0.45+1.30x1.60	=11.2 sqm.	
	2		
	End Walls 2x2x10x0.60	=24.0sqm.	
		154.53 sqm.	
		@ Rs 109.15 sqm.	
	Carriage of materials by MT incl. loading and unloading.		
	(i) Sand from source to site of work for 54 kms.		
	Qty. vide item no. 2. 24.62cum @ 0.47/cum	11.57 cum	
	Qty. vide item no. 3. 53.26cum @ 0.45/cum	23.97 cum.	

10

Qty. vide item no. 8 9.75 cum @ 0.45/cum

4.38 cum

@ Rs. 255-29 cum

(ii) Bajree from distance of 76 kms by MT.

Qty. vide item no. 3 53.26 cum @ 0.95/cum

= 50.59 cum

Qty. vide item no. 8 9.75 cum @ 0.95/cum

= 9.26 cum

59.85 cum

@ Rs. 326-15/m³

(iii) Stone agg. 40mm from av. distance of 20km by MT.

Qty. vide item no. 2. 24.62 cum @ 0.89/cum

= 21.91 cum

@ Rs. 159.60/cum

(d) Stone from av. distance of 6kms by MT.

Qty. vide item no. 3 53.26 cum @ 20%

= 10.65 cum

Qty. vide item no. 5

= 9.17 cum

Qty. vide item no. 6

= 8.58 cum

Qty. vide item no. 7

= 8.64 cum

37.04 cum

@ Rs. 94.65/cum.

Add 120% Total above

Add cost of wire Crate

Add for Temporary Diversion.

G. Total

Say Rs.:

4-29 lacs

10210-4

19520-4

3497.00

3596.00

104110-4

220932-4

4000.00

20000.00

429042-4

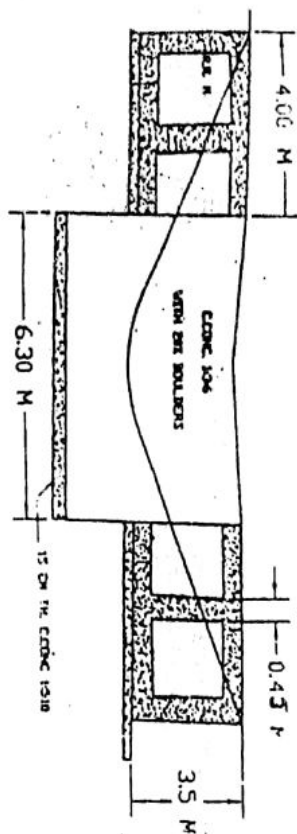
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|--------------------|-------------------------|
| 1. Crushed Bajree: | Ramgarh on BKNHIB road. |
| 2. Stone Agg. | Local ravines |
| 3. Stone | -do- |
| 4. Sand | River Chenab Dremnager |

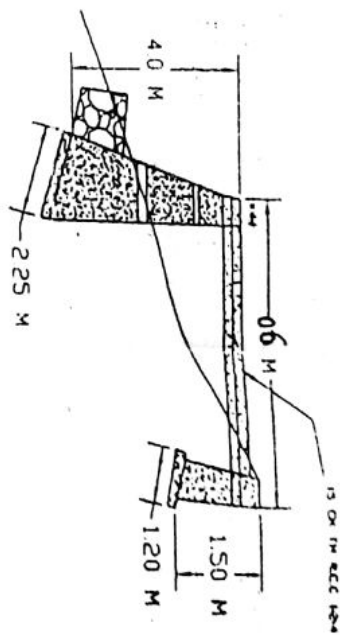
Executive Engineer,

PWD (R&B) Special Sub Division.

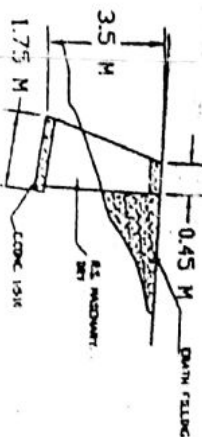
AmrODA.



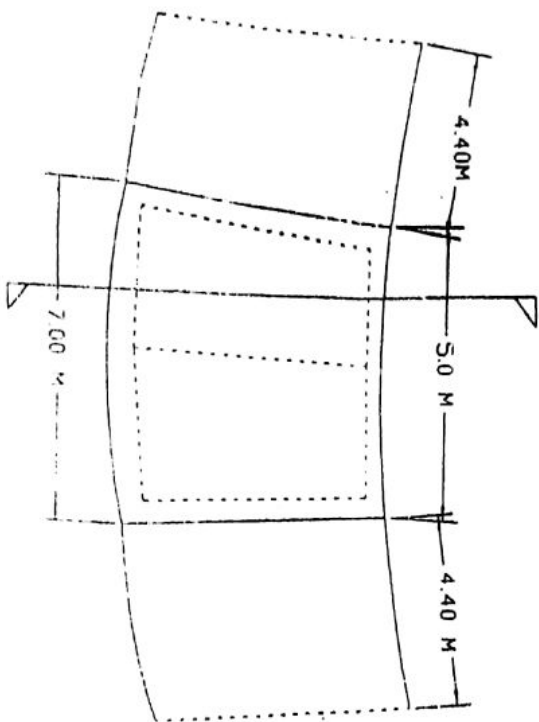
ELEVATION



X-SECTION AT A-A'



SEC. OF APPROACH WALL



SAMPLE DRAWING FOR CONST. OF 6.0 M LONG PACCA SCUPPER

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Executive Engineer,
P.W.D. (R&B) Special Sub Division

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ABDODA

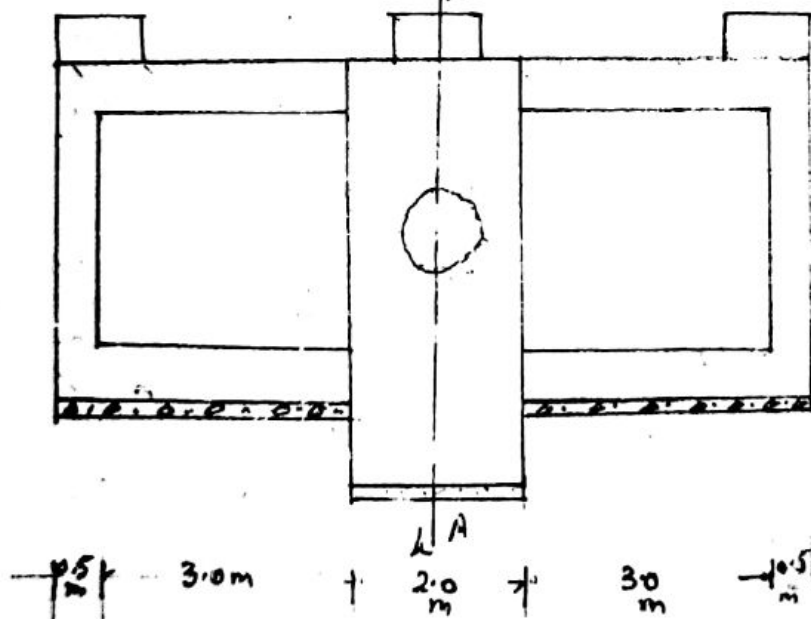
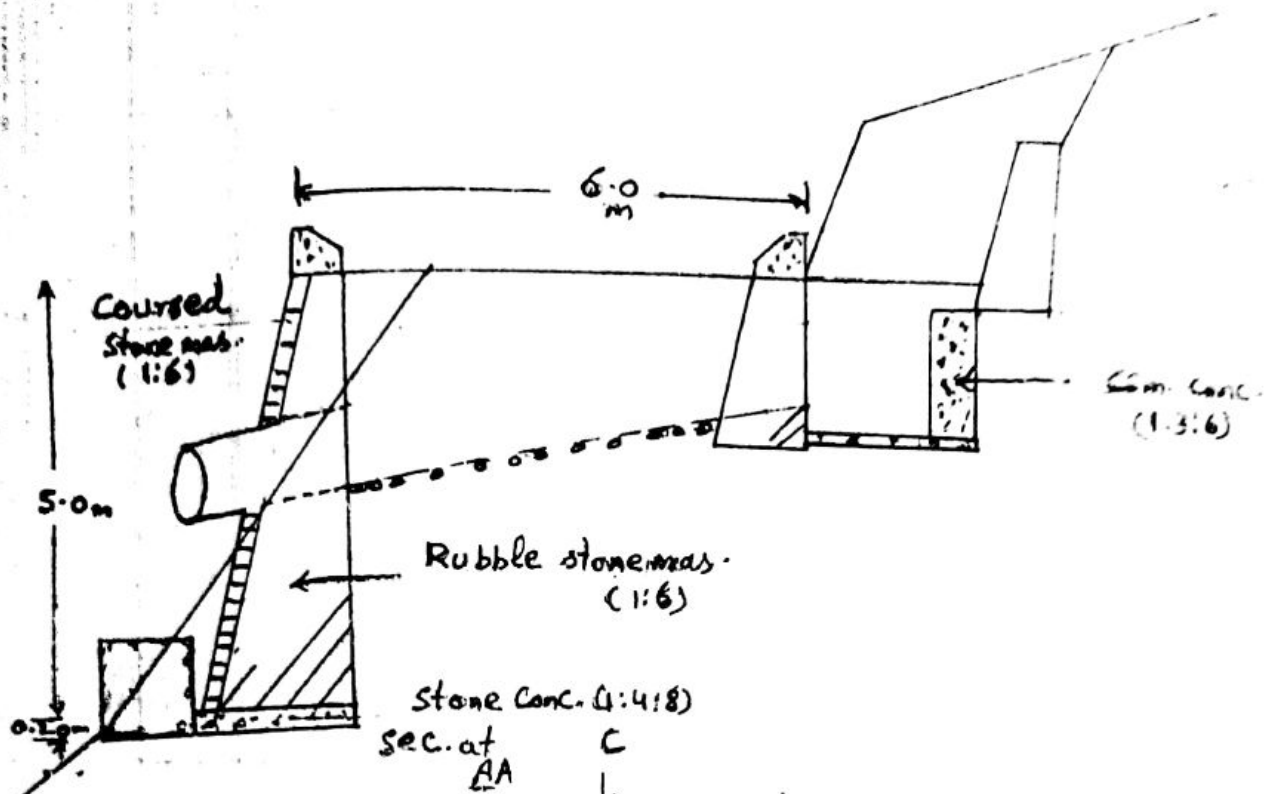
TYPICAL ESTIMATE FOR CONSTRUCTION OF 900 MM DIA HUME PIPE CULVERT.

S.No	Description of Items	Amount in Rupees
1	Earth work in excavation and foundation not exceeding 1.5 mtrs in width as well as 10 sqm on plan incl. dressing of sides and ramming of bottom lift upto 1.5 m and lead 50 m, incl. getting out the excavated soil as directed :- D/Wall = $1 \times 2.50 \times 1.65 \times (2.40 + 1.40)/2 = 7.84 \text{ cum}$ C/Wall = $1 \times 2.50 \times 1.40 \times (1.40 + 1.20)/2 = 4.55 \text{ cum}$ Catch Pit = $1 \times 2.40 \times 1.95 \times 0.95 = 4.33 \text{ cum}$ Pipe portion = $1 \times 8.60 \times 1.50 \times (0.80 + 0.40)/2 = 7.92 \text{ cum}$ Crat = $1 \times 6.00 \times 1.20 \times (1.20 + 0.6)/2 = 6.48 \text{ cum}$ Total = 31.12 cum @ Rs. 82.35/ cum	2564.00
2	Providing and laying in position Cement concrete of 1:5:10, Stone agg. 40 mm Nallah:- D/Wall = $1 \times 2.50 \times 1.65 \times 0.15 = 0.62 \text{ cum}$ C/Wall = $1 \times 2.50 \times 1.40 \times 0.15 = 0.52 \text{ cum}$ Pit = $1 \times 2.40 \times 1.95 \times 0.15 = 0.68 \text{ cum}$ Pipe = $1 \times 8.60 \times 1.20 \times 0.15 = 1.58 \text{ cum}$ Total = 3.40 cum @ Rs.10.49 /cum	3567.00
3	Providing and Laying Cement conc. 1:3:6 with 20% plum in retaining walls, return walls (any thickness including attached pilaster columns piers etc upto floor 5 level:- D/Wall = $1 \times 2.50 \times (1.35 + 0.60)/2 \times 3.50 = 8.53 \text{ cum}$ C/Wall = $1 \times 2.50 \times 2.00 \times (1.10 + 0.60)/2 = 4.25 \text{ cum}$ Parapit = $2 \times 2.50 \times 0.60 \times 0.60 = 1.80 \text{ cum}$ Pit wall = $2 \times 1.90 \times 0.50 \times 1.25 = 2.37 \text{ cum}$ $1 \times 1.50 \times 0.50 \times 1.25 = 0.94 \text{ cum}$ Deduct by Portion D/Wall = $1 \times 2/4 \times 0.90 \times 1.00 = 0.64 \text{ cum}$ C/Wall = $1 \times 2/4 \times 0.90 \times 0.60 = 0.38 \text{ cum}$ Total = 1.02 cum Net = 16.87 cum @ Rs.1201.60/cum	20271.00
4	Centering and shuttering incl. strutting, propping etc and removal of form for retaining walls :- D/Wall = $2 \times 2.50 \times 3.50 = 17.50 \text{ sqm}$ $2 \times (1.35 + 0.60)/2 \times 3.50 = 6.82 \text{ sqm}$ C/Wall = $2 \times 2.50 \times 3.20 = 16.00 \text{ sqm}$ $2 \times (1.10 + 0.60)/2 \times 2 = 3.40 \text{ sqm}$ Parapit = $2 \times 2 \times 2.50 \times 0.60 = 6.00 \text{ sqm}$ $2 \times 2 \times 0.60 \times 0.60 = 1.44 \text{ sqm}$ Total = 45.16 sqm @ Rs.119.15/sqm	4999.00
5	Providing and laying horizontal DPC 50mm in nominal mix M15 grade nominal size of stone agg. 20 mm :- Parapit = $2 \times 2.50 \times 0.60 = 3.00 \text{ sqm}$ Pit = $8 \times 1.50 \times 1.50 = 2.25 \text{ sqm}$ Total = 5.25 sqm @ 108.50/sqm	570.63
6	Hand Packed Stone filling in wire crates excluding cost of crates -	

	1x6.00x1.20x1.20= 8.64 cum @ 151.80	312.00
7	Stone filling, hand packed incl. supply of stones:- Front/D/Walls: 1x2.50(1.20+0.30)/2=1.87 cum @ 132.15/cum	247.00
8	Supply of labour for laying RCC Hume Pipe in position 4 No Pipes of 90 mm dia 1 mason for one day @ Rs.150.00 per day 10 mazdoor for one day= 10 Nos @ 90/day	150.00 900.00
9	Filling of available excavated earth in layers not exceeding 20mm in depth consolidation of each deposited layer raming and watering lead upto 50 mtrs and lift 1.5 mtrs: 1x8.80x1.20x(0.80+1.00)/2= 9.50 cum @ 26.20/cum	249.00
10	Carriage of materials for following distances by MT incl. loading un-loading and staking. a) Sand for 5.4 Kmtrs by MT Qty. vide item No.2 = 3.40 cum @ 0.47cum= 1.6 cum. Qty. vide Item No:3= 16.87 cum @ 0.45/cum= 7.59 cum Qty. Vide Item No:5= 45.16 @ 0.018 /cum= 0.81 cum Total= 10.00 cum @ 255 71/2 2550 - b) Stone agg. Upto 40 mm for 7.6 kmtr MT Qty. vide item No: 3= 16.87 @ 0.95= 16.03 cum Qty. vide item No:5= 45.16 cum @ 0.036/cum= 1.62 cum Total = 17.65 cum @ 326 +5/cum 5757 - c) Stone agg. 40 mm size 6 Kmtrs distance Qty. vide item No: 2= 3.40cum @ Rs. 87 1/2/cum 296 - d) Stone for 6 Kmtr distance Qty. vide item No:6 = 8.64 cum Qty. vide item No:7= 1.87 cum Qty. vide item No:3= 16.87 cum @ 20%=3.37 Total = 13.88 cum @ 94 1/2/cum 1314 - Add 120% Total 44604 - Add above 52621 - Add Cost of 4 No Pipes @ Rs.7500 /each 30000.00 Add cost of 03 No collars @ 500 each 1500.00 Add 01 No Crate @ Rs.4000/each 4000.00 Add for temporary diversion 10000.00 G. Total 143005 - Say Rs. 1.44 lacs	

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Executive Engineer,
PWD (R&B) Special Sub Division
by *Handwritten signature* A.M.D.O.A.



Elevation

SCALE: 1cm = 10m

Dwg. showing Elevation & section of 900mm ϕ HP Culvert.

[Signature]

Executive Engineer,
PWD (R & B) Special Sub Division,
ADODDA.

TYPICAL ESTIMATE FOR CONSTRUCTION OF PUCCA DRAIN.

(Length 10 mtr)

S. No	Description of Items	Amount (Rupees)
1	Providing and laying cement conc. 1:5:10 (1 cement: 5 Coarse sand: 10 stone aggregate) 40 mm size of stone aggregate: Bed=1x10x1.05x0.15=1.57 cum @ Rs.1057.45/cum	1660.00
2	Random Rubble Masonry with Nallah stone in foundation and plinth including leveling up 1:6:12 (1: cement, 6: coarse sand, 12: stone aggr. 20mm nominal size) with cement mortar 1:6 (1 cement, 6 coarse sand) (0.45+0.6)/2x0.6x10=3.15 cum @ Rs.1059.35/cum	3337.00
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering, all work upto plinth level for 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) 50mm thick. 1x0.6x10= 6.0 Sqm @ Rs.108.95/Sqm	653.00
	Carriage of Sand av. dist. 5.4 K.M by MT: Qty. vide Item No:2= 3.15 cum @ .038= 1.19 cum Qty. vide Item No:3= 6.0 Sqm @ .023/Sqm= 0.13 Cum T=1.32 cum @ Rs.255.75/cum	338.00
	Carriage of material: Crushed bajree Aggregate 20 mm size: 76 K.M by MT Qty. vide item No:3= 6.0 Sqm @ 0.045/Sqm= 0.27 cum @ 326-15. /cum	88.00
	Carriage of Stone av. distance 5 K M by M.T.: (a) 40mm aggr. Qty. vide item No 1 = 1.57 cum @ 0.89=1.39 cum @ Rs 87.00/cum (b) Stones Qty. vide item No: 2= 3.15 cum @ Rs.94.65 /cum	121.00 298.00
	Total	6495.00
	Add 100% above	6495.00
	Grand Total	12990.00

Cost per meter= Rs. 1299/-

Say Rs 1300/-

Source:

- Crushed Bajree: Ramgarh on BKNHIB road.
- Stone Aggr. Local ravines
- Stone -do-
- Sand. Premnagar

[Signature]

Executive Engineer,
PWD (R&B) Special Sub Division,
DODA
[Signature]

Typical estimate for construction of Pucca Parapet (cost for 1 No.).
(Length 1 mtr)

S. No	Description of Items	Amount in Rupees
1	Providing and laying cement concrete 1:3:6 nominal size of stone aggr. 20 mm with 20% plum (0.15+0.5)/2x0.35=0.11 Sqm (0.5+0.5)/2x0.15=0.07 Sqm T= 0.18x1=0.18 cum @ Rs.1203.63 cum	216.00
2	Centering and shuttering 2x0.5x1=1.0 Sqm (0.15+0.5)/2x0.35x2 =0.22 Sqm (0.5+0.5)/2x0.15x2=0.15 Sqm T= 1.37 Sqm @ Rs.109.15 /Sqm	149.00
3	Carriage of crusher Bajree avr. Distance of 76 KM by MT Qty. vide item No:1, 0.18 @ 0.752= 0.13 cum @ Rs.326.15/cum	42--
4	Carriage of sand average distance 54 KM by MT, Qty. vide item No: 1, 0.18 @ 0.376= 0.06 cum @Rs.255.75/cum	15--
Total		422--
Add 100% above		422--
Grand Total		844--

Cost for one Parapet= 840/6

Ref.to source

1. Crushed Bajree: BKNH1B
2. Sand. River Chenab *Premnagar*

MC

[Signature]
Executive Engineer,
P.W.D (R & B) Special Sub Division,
4. *ADN* DODA.

Typical estimate for construction of Semi Pucca R/W all 4.0Mtrs height.
(Length 11.00 mtrs)

S. No	Description of Items	Amount in Rupees
1	Earth work in excavation over areas (exceeding 30cm in depth. 1.5m in width as well as 10sqm. on plan) incl. disposal of excavated earth and lift upto 1.5m, disposed earth to be leveled and neatly dressed. For a lead of 25Mtrs. 50% of all kinds of soil, 30% ordinary rock, 20% Hard rock. $1/2 \times 2.30 \times 0.55 = 0.63 \text{ Sqm}$ $2.30 \times 3.10 \times 0.30 = 0.81 \text{ Sqm}$ 2 $(3.10 \times 2.60 \times 2 \times 0.45) = 1.28 \text{ Sqm}$ Total = $2.72 \times 11 = 29.92 \text{ cum}$ @ Rs. 119.10/cum	3563.00
2	Providing and laying cement conc. 1:5:10 (1 cement: 5 Coarse sand, 10 stone aggregate) 40 mm size of stone aggregate: $1 \times 11.00 \times 2.6 \times 0.15 = 4.29 \text{ cum}$ @ Rs. 1057.45/cum	4536.00
3	Polygonal Rubble Masonry in (1 Cement: 6 Coarse Sand) Nallah in foundation and plinth incl. leveling up with cement conc. 1:6:12 mix with 20mm nominal size stone aggr. Bottom Band = $11.00 \times (2.3 + 2.6) / 2 \times 0.60 = 16.17 \text{ cum}$ Top Band = $11 \times (0.60 + 0.90) / 2 \times 0.60 = 4.95 \text{ cum}$ Vertical Band = $5 \times (0.90 + 2.3) / 2 \times 2.80 \times 0.6 = 13.44 \text{ cum}$ Total = 34.56 cum @ Rs. 1059.35/cum	36611.00
4	Polygonal Random Rubble Masonry Nallah Stones laid dry in foundation and plinth. $(0.9 + 2.3) / 2 \times 2 \times 2.8 \times 4 = 35.84 \text{ cum}$ @ Rs. 388.45/cum	13922.4
5	Providing and Laying horizontal DPC 50 mm thick in nominal mix concrete 1:2:4 with 20mm stone aggregate: $11 \times 0.6 = 6.6 \text{ sqm}$ @ Rs. 108.95/sqm	719.00
6	Supply & hand packed filling of stones $11 \times 1/2 \times 1.5 \times 2.5 = 20.62 \text{ cum}$ @ Rs. 32.15/cum	2725.45
7	Centering and shuttering Bed, $11 \times 0.15 = 1.65 \text{ Sqm}$ @ Rs. 109.15 /Sqm	180.00
8	Carriage of material by MT Stone 6 K.M by M.T Qty. vide item No: 3 = 34.56 cum	

	4=35.84 Cum 6=20.02 cum T= 91.02 cum @ Rs.94.65 /cum	8613.00
9	Stone Aggregate 40 mm av. distance 6 K.M. by MT Qty. vide item No: 2= 4.29 cum @ 0.89/cum=3.81 cum @ Rs.87.00/cum	331.00
10	Nallah Bajari avg. distance 10 km by MT: Qty. vide item No: 7= 6.6 cum @ 0.045/cum=0.29 cum @ Rs.103.45 /cum	30.00
11	Sand av. distance 54 4 K.M. by M.T: Qty. vide item No: 2= 4.29 cum @ 0.47 /cum = 2.01 cum 3=4.18 Cum @ 0.38/cum=9.18 cum 7=6.6 cum @ 0.023/cum=0.15 cum T= 11.34/cum @ 255-75 /cum	2900- ⁺
Total		74132- ⁺
Add. 90% above		66719- ⁺
Grand Total		140851- ⁺

Cost per Meter= Rs. 12005-⁺

Say Rs 12005-⁺

Ref.to source:

- | | | |
|----|----------------|-------------------------------|
| 1. | Nallah Bajree: | Local |
| 2. | Stone Agg. | Local Nallah. |
| 3. | Stone | Local ravines |
| 4. | Sand | -do- |
| | | River Chenab <i>Premnagar</i> |

PC
Farooq

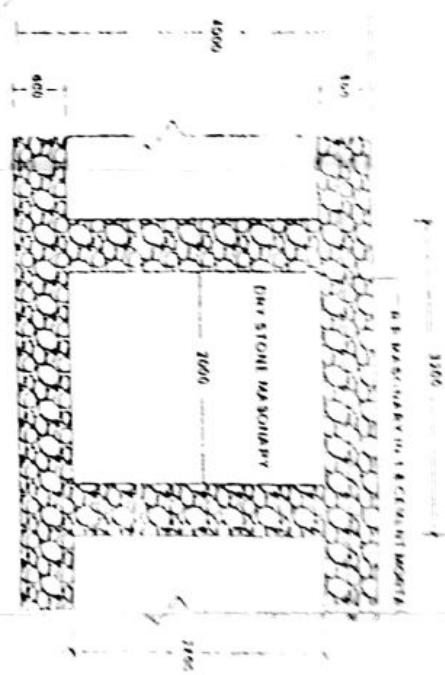
[Signature]
Executive Engineer,
PWD (R&B) Special Sub Division,
W *Am* DODA.

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TYPICAL SECTION OF RM WALL



FRONT ELEVATION OF RM WALL



- 1 THE STONE WALL SHALL BE BUILT IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
- 2 THE FACE OF THE WALL SHALL BE NOT MORE THAN 100MM THICK.
- 3 THE HEIGHT OF COURSES SHALL DEPEND ON AVAILABLE SIZE OF STONE. IN NO CASE THE HEIGHT OF COURSE SHOULD BE LESS THAN 150MM.
- 4 THE WEAPTING OR INTERIOR FILLING OF THE WALL SHALL BE CONSIST OF R.A. BROOD STONE CAPABLY LAYED IN TWO PROPER BEDS IN WORK.
- 5 THE USE OF CURPS SHALL BE RESTRICTED TO THE FILLING OF VERTICES BETWEEN THE ADJACENT STONE IN WEAPTING AND THESE SHALL NOT EXCEED 10% OF THE QUANTITY OF WEAPTING.
- 6 THE WEIGHT OF CURPS SHALL BE AS ACCEPTED AND NOTED IN WORK.

TYPICAL SECTION OF RETAINING WALL

Executive Engineer,
PWD (R&B) Social Sub Division,
MADAPODA.

SAMPLE ESTIMATE FOR CONSTRUCTION OF KILOMETER STONE, RD STONE AND CAUTION BOARDS.

TYPICAL LENGTH = 3.25 Kms

S. No	Description	Amount. (Rs)
1	Earth work in excavation over area (exceeding 30cm in depth, 1.5m in width as well as 10sqm on plan) incl. disposal of excavated earth lead upto 25m and lift upto 1.5m in all kins of soil. RD's stone = $130 \times 0.24 \times 0.30 \times 0.15$ Kilometer stone = $4 \times 0.37 \times 0.48 \times 0.70$ Burjee $100 \times 0.17 \times 0.20 \times 0.15$	 = 1.4Cum = 0.14 Cum = 0.51 Cum = 2.05Cum
	Total @ Rs. 82.35 /Cum	Rs. 169.00
2	Centring and shuttering incl. strutting, propping etc and removal of form for lintels beams plinth beams, girders, bressumers and cantilevers Kilometer stone = $4 \times 2 \times 0.30 \times 0.485$ RD's stone = $130 \times 2 \times 0.20 \times 0.40$ Sides = $4 \times 2 \times 0.18 \times 0.485$ RD's srone stones = $130 \times 2 \times 0.15 \times 0.40$ Burjees = $100 \times 2 \times 0.150 \times 0.42$ Sides = $100 \times 2 \times 0.15 \times 0.42$	 = 1.16Sqm = 20.80Sqm = 0.69 Sqm = 15.60 Sqm = 12.00 Sqm = 12.00Sqm = 62.21Sqm
	Total @ Rs. 90.55/Sqm	Rs. 5633.00
3	Reinforcement for R,C.C work incl. straightening, cutting, bending, placing in position and binding all complete cold twisted bars. Kilometer stone main bars = $4 \times 3 \times 1.00$ = $4 \times 7 \times 0.25$ R.D;s stone = $130 \times 5 \times 0.55$ = $130 \times 5 \times 0.15$ Burjees. = $100 \times 2 \times 0.50$ = $100 \times 4 \times 0.50$	 = 12.00 RM = 07.00RM = 214.50RM = 97.50RM = 100.50RM = 60.00RM = 491.00 RM
	Total @ Rs. 0.93 Kg/RM = 191.49Kg = 1.91 Qtl @ Rs. 2465.00/Qtl.	Rs. 4708.00
4	Providing and laying cement concrete in retaining walls and walls etc. in 1: 3 : 6 graded stone aggregate 20mm nominal size crushed excl. the cost of centring shuttering and finishing. Kilometer stone. = $4 \times 0.37 \times 0.485 \times 0.60$ = $4 \times 0.35 \times 0.485 \times 0.10$ = $4 \times 0.33 \times 0.18 \times 0.385$ R.D. Stone = $130 \times 0.24 \times 0.30 \times 0.45$ = $130 \times 0.22 \times 0.25 \times 0.10$ = $130 \times 0.20 \times 0.15 \times 0.30$ Burjees = $100 \times 0.17 \times 0.20 \times 0.45$ = $100 \times 0.16 \times 0.15 \times 0.42$	 = 0.43Cum = 0.67 Cum = 0.09 Cum = 4.21 Cum = 0.71 Cum = 1.17Cum = 1.53Cum = 1.008Cum = 9.10 Cum
	Total @ Rs. 1675.25/Cum	Rs. 15245.00

Cont. 2nd.

2nd. of km stones

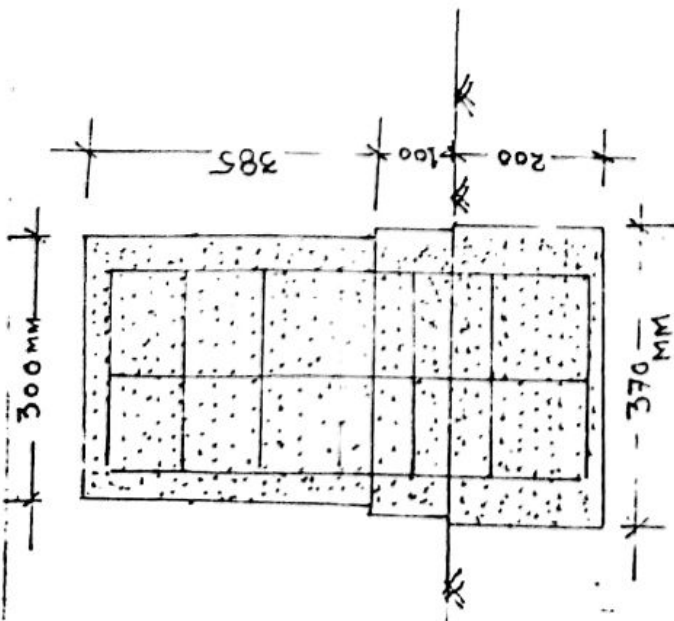
B-92

5	12mm cement plaster of mix 1:4		
	Kilometer stone. = $4 \times 2 \times 0.35 \times 0.10$	=0.28Sqm	
	= $4 \times 2 \times 0.33 \times 0.385$	=1.01Sqm	
	R.D. Stone = $130 \times 2 \times 0.22 \times 0.10$	=5.72 Sqm	
	= $130 \times 2 \times 0.20 \times 1.30$	=15.60Sqm	
	Side = $130 \times 2 \times 0.20 \times 0.40$	=20.80 Sqm	
	Kilometer stones. = $4 \times 3 \times 0.18 \times 0.485$	=0.65 Sqm	
	Burjees = $100 \times 2 \times 0.15 \times 0.40$	=12.00Sqm	
	= $100 \times 2 \times 0.15 \times 0.40$	=12.00 Sqm	
	Total	=68.10Sqm	
	@ Rs. 55.20/Sqm		Rs. 3769
6	Carriage of sand average 25 Kms by M.T		
	Qty. vide item No. 4 = 9.10 Cum @ Rs. 0.47/Cum	=4.27 Cum	
	-do- 5 = 68.10Sqm @ 0.18/Sqm	=1.22Cum	
	Total	= 5.49 Cum	
	@ Rs. 162.95/Cum		Rs. 894.00
7	Carriage of bajree average 65 Km by M.T.		
	Qty. vide item No. 4 = 9.10Cum @ 0.94/Cum		
	= 8.55Cum @ Rs. 290.95/cum		Rs. 2488.00
8	Painting with synthetic enamel paint of approved brand and manufacture to give and even shade two or more coats on concrete work.		
	Kilometer stone. = $4 \times 2 \times 0.35 \times 0.10$	=0.28Sqm	
	= $4 \times 2 \times 0.33 \times 0.385$	=1.01Sqm	
	Sides = $4 \times 2 \times 0.18 \times 0.485$	=0.60Sqm	
	R.D. Stone = $130 \times 2 \times 0.20 \times 0.40$	=1.60 Sqm	
	= $13 \times 2 \times 0.22 \times 1.10$	=5.72Sqm	
	Side = $130 \times 2 \times 0.20 \times 0.40$	=20.80 Sqm	
	= $130 \times 2 \times 0.20 \times 0.40$	=20.80 Sqm	
	Burjees = $100 \times 2 \times 0.15 \times 0.40$	=12.00Sqm	
	= $100 \times 2 \times 0.15 \times 0.40$	=12.00 Sqm	
	Total	=68.10Sqm	
	@ Rs. 25.50/Sqm		Rs. 1736.00
9	Painting with synthetic enamel paint of approved brand and manufacture to give and even shade two or more coats for lines, around width over 100mm on pavement.		
	Qty. vide item No. 8 = 68.10 Sqm @ Rs. 25.50/sqm		Rs. 1736.00
	Total		Rs. 36349.00
	Add 100% above anticipated		Rs. 36349.00
	G. Total		Rs. 72698.00

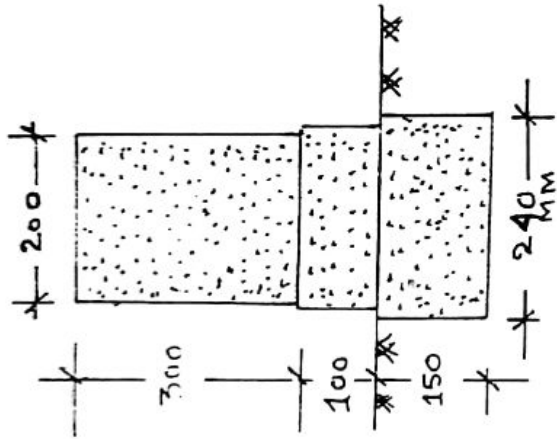
Const per Km = 22340/
Say Rs. 0.22 lacs per Km.

Assistant Executive Engineer
(R&B) Sub Division
WEST Ddoa.

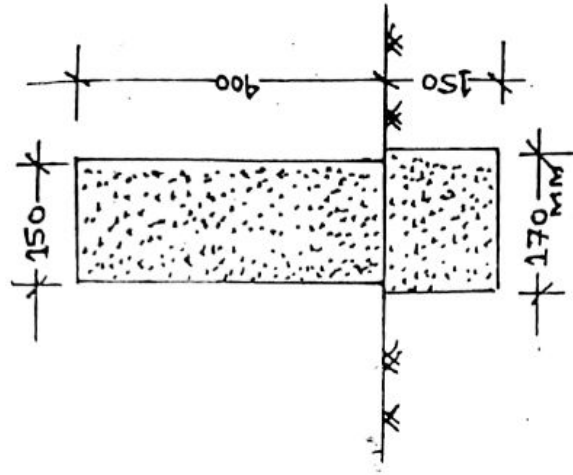
Executive Engineer,
P.W.D. (R&B) Special Sub-Division,
Doda.



KILOMETER STONE



RD STONE



CEMENT CONC. BURJEES

TYPICAL DRAWING FOR K.M. STONES,

RD STONES & BURJEES.

SCALE 1:10

Asstt. Executive Engineer
PWD (G&B) West Sub-Divn.
DODA

EXECUTIVE ENGINEER
R&S SPL. SUB. DIVISION
W. DODA

Typical estimate for the providing and laying Granular Sub- Base
(Typical for 1 km length)

S no	Particulars of items	Amount
1	supply and stacking (at site) closed graded granular sub-base material, Grading -I max size aggregate 75mm (stack measurement reduced by 12.50 %) (Conforming to clause 401 MOST specification 1995) $=1 \times 1000.00 \times 3.30 \times 0.20 = 660.00 \text{ cum}$ @ Rs 55.55/cum (SSR 1997)	36663.00
2	laying water and compacting (with 80-100 KN) road roller Granular sub- base to specified, grade, cross- sections and density finished work to be measured material available along the road (Conforming to clause 401 MOST specification 1995) $=1 \times 1000.00 \times 3.30 \times 0.20 = 660.00 \text{ cum}$ @ Rs 48.30/cum (SSR 1997)	31878.00
3	Carriage of GSB Material from source to site of work for an avg. distance of 20 KM by MT. Qty. vide item no (1) = 660.00cum @ Rs 151.10/ Cum (SSR 1997)	99726.00
	Total	168267.00
	Add 140% Above	235574.00
	Grand Total	403840.00

Cost per cum = Rs 611.00

Say Rs 600.00

[Signature]

[Signature]
Executive Engineer,
PWD (R&B) Special Sub Division.
W. *[Signature]* DODA.

Providing and laying WBM G-1 100mm thick

(Typical for 1 km length)

S. No.	Particulars of items.	Amount (Rupees)
1.	Providing and laying water bound macadam with specified stone agg. Stone screening and binding material incl. screening, sorting spreading to template and consolidation with 8-10 tone power road roller. Sub base with stone agg. 90-45mm nominal size incl. stone screening of 13.20mm nominal size. 1x 1000.00 x 7.00 = 3000.00 sqm Add 10% for curves = 300.00 sqm T= 3300.00 Sqm x 0.10 = 330.00 cum @ Rs.290.95/cum	96013.00
2.	Carriage of stone screening from an av. dis. of 7.6 km by MT. Qty. vide Item No: 1 = 330.00 x 0.256 = 84.48 cum @ Rs. 326.15/cum	27553.44
3.	Carriage of stone agg. 90-45mm size from an av. dis. of 6km by MT Qty. vide Item No: 1 = 330.00 cum @ Rs. 87.00/cum	28710.00

Ref.to source:

1. Screening: Ramgarh on BKNH1B road.
2. Stone Agg. Local ravines

Total = Rs. 152276.44

Add 120% above percentage = Rs. 182731.73

Total = Rs. 335008.17

Cost for 1 KM = Rs. 335000.00

Cost /Sqm. = Rs. 101.51/m²

Say Rs. 102/m²

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Executive Engineer,
PWD (R & B) Special Sub Division,
W. Adm DODA.

Providing and laying WBM G-II 75mm thick

(Typical for 1 km length)

S. No.	Particulars of items.	Amount (Rupees)
1.	Providing and laying water bound macadam with specified stone agg. Stone screening and binding material incl. screening, sorting spreading to template and consolidation with 8-10 tone power road roller. Sub base with stone agg. 63-45mm nominal size incl. stone screening of 13.20mm nominal size. $1 \times 1000.00 \times 3.00 = 3000.00$ Add 10% for curves = <u>300.00 sqm</u> $T = 3300.00 \text{ Sqm} \times 0.075 = 247.50 \text{ cum} @ \text{Rs.} 298.75/\text{cum}$	73941--
2.	Carriage of stone agg. upto 63 mm from an av. dis. of 6 km by MT. Qty. vide Item No:1 = 247.50 cum @ Rs. 87.00 /cum	21532.50
3.	Carriage of stone screening 13.20mm size from an av. dis. of 76 km by MT. Qty. Vide Item No: 1 = 247.50 cum @ 0.153 = 38.86 cum @ Rs. <u>326-15</u>	12674--

Ref:to source:

1. Screening: Ramgarh on BKNHIB road.
2. Stone Agg. Local ravines

108148--

$\frac{1209}{100}$ Total = Rs. 108148--
 Add 120% above percentage = Rs. 129778--
 G.Total = Rs. 237926--
 Cost/Sqm. = Rs. 72-09

Say Rs. 72 / m²

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 Executive Engineer,
 PWD (R&B) Special Sub Division,
 by ADDODA.

Providing and laying WBM G-III 75mm thick

(Typical for 1 km length)

S. No.	Particulars of items.	Amount (Rupees)
1.	Providing and laying water bound macadam with specified stone agg. Stone screening and binding material incl. screening, sorting spreading to template and consolidation with 8-10 tone power road roller. Sub base with stone agg. 53-22.40 mm nominal size incl. stone screening of 11.20 mm nominal size. $1 \times 1000.00 \times 7.00 = 3000.00 \text{ sqm}$ Add 10% for Curves = <u>300.00 sqm</u> $T = 3300.00 \text{ Sqm} \times 0.075 = 247.50 \text{ cum}$ <u>@ Rs. 315.15/cum</u>	77999.00
2.	Carriage of stone screening from an av. dis. of 76 km by MT. Qty. vide Item No: 1 = 247.50 cum @ 0.228/cum = 56.44 cum <u>@ Rs. 326-15/m³</u>	18428-2
3.	Carriage of stone agg. 53-22.40 mm size from an av. dis. of 6 km by MT. Qty. vide Item No: 1 = 247.50 cum @ Rs. 87.00/cum	21533.00
4.	Supply & stacking of stone dust av. dis. of 76 Kmtrs by MT Qty. vide Item No: 1 = 247.50 cum @ 8% = 19.80 cum <u>@ Rs. 326-15/m³</u>	6450-2

Ref. to source:

1. Screening: Ramgarh on BKNH1B road.
2. Stone Agg. Local ravines

Total = Rs. 124390-2
Add 120% above percentage = Rs. 149270-2
G.Total = Rs. 273676-2
Cost/Sqm. = Rs. 82-93
Say Rs. 83/m²

[Signature]

[Signature]
Executive Engineer,
PWD (R&B) Special Sub Division,
W. AmDODA.

Typical Estimate for Providing and Laying 20mm thick Open Graded Premix carpet

S.No.	Particulars of items	Amount
1.	Providing and laying 20mm thick open graded premixed carpet surfacing with 1.8cum and 0.90 cum. of stone chipping of 13.20mm & 11.20mm size incl. applying tack coat using hot straight run bitumen of grade 80/100 incl. heating and spraying the bitumen with mechanically operated spray, premix carpet laid with paver finisher incl. seal coat complete (excl. cost of bitumen). 1x2000.00x3.00 sqm. = 3000.00 sqm. Add 10% for curves = 300.00 <u>sqm.</u> Total = 3300.00sqm @ Rs.150.00/sqm.	4,95,000.00

Ref. to source:

1. Screening: Ramgarh on BKNH1B
1. Sand: River Chinab at *Poemrager*

Total = Rs. 4,95,000.00

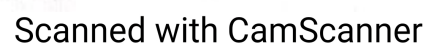
Add cost of bitumen 10.00Tons. @ Rs 40000/tons. = Rs. 4,00,000.00
G. Total = Rs. 8,95,000.00

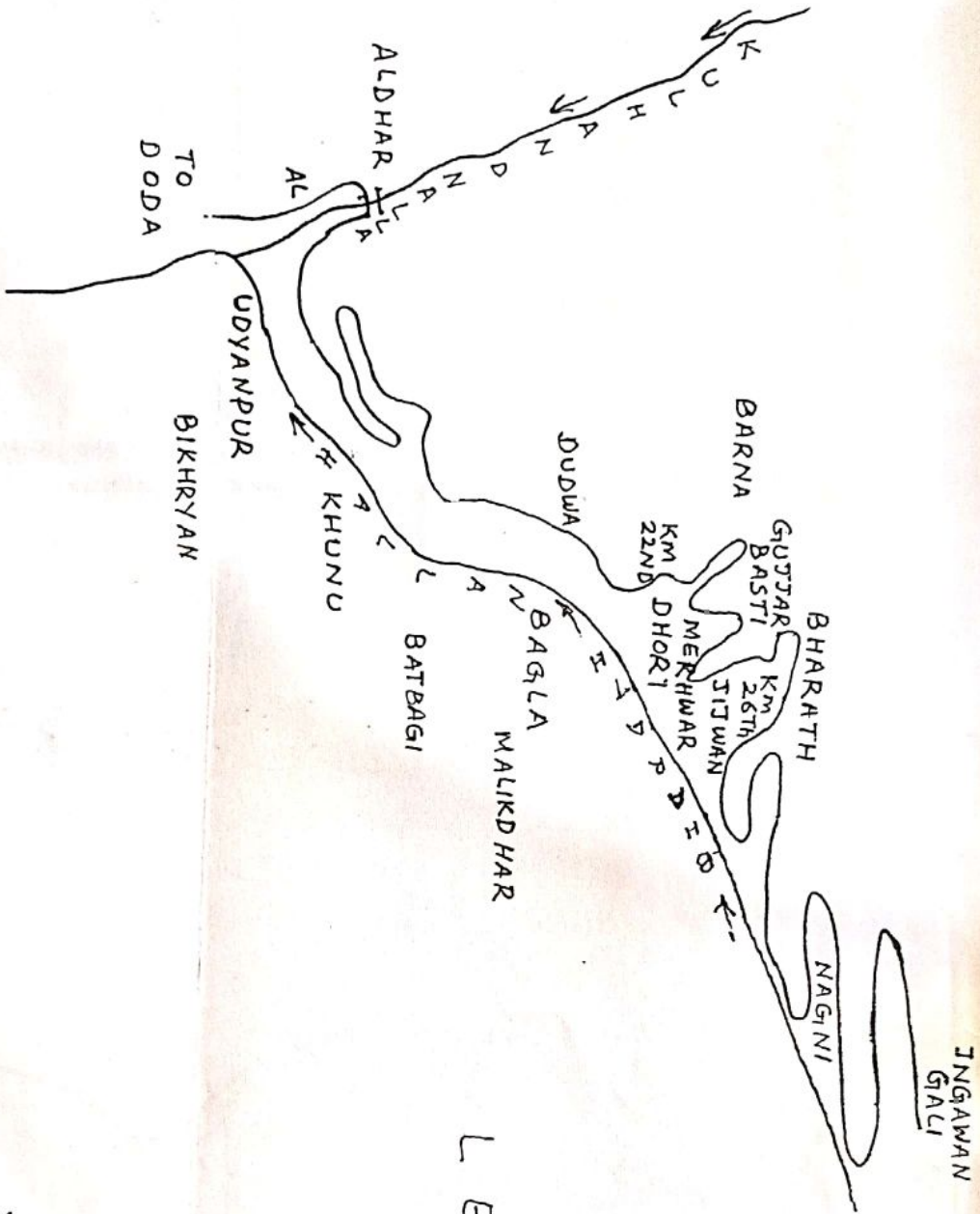
Cost / Sqm. = Rs. 271.21/sqm

Say Rs. 271.00/sqm.

Y. Jaiswal

[Signature]
Executive Engineer,
PWD (R&B) Special Sub Division.
14. *APR* 2004.





INDEX:
MAP.

SCHEME: BHARTH KASHWAN
ROAD FROM KM 1st
TO 13th.
(UNDER:- C.R.F.)

LEGEND :-
PROP. ROAD
UNDER CONST. —

[Signature]
A.E.E.
EAST.

EXECUTIVE ENGINEER,
R&B SPL SUB
DIVISION,
UDODA.

