

GOVERNMENT OF JAMMU AND KASHMIR

PMGSY
(JKRRDA)



PRADHAN MANTRI GRAM SADAK YOJANA

Detailed Project Report

Of

Stage II of Kakawthal to Brannar road

Length of Road=3.2 Km

Const Cost= 208.33 Lacs Maint. Cost=16.67 Lacs

Total Cost=225.00 Lacs

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1. Introduction

Objectives of Pradhan Mantri Gram Sadak Yojna (PMGSY)

Rural Road connectivity is a key component of rural development by promoting access to economic and social services and thereby generating increased agricultural incomes and productive employment opportunities. It is also a key ingredient in ensuring poverty reduction.

It was against this background of poor connectivity that the Prime Minister announced in 2000, a massive rural roads program. The Prime Minister's Rural Road Program (Pradhan Mantri Gram Sadak Yojana, PMGSY) set a target of:

- Achieving all-weather road access to every village/habitation with a population greater than 1000 by 2003
- Providing all-weather road access to all villages/habitations of population greater than 500 people [250 in case of hill States (North-Eastern states, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttarakhand), the desert areas and tribal areas] by the end of the Tenth Five Year Plan, i.e., 2007

All Weather Road

An all-weather road means providing obstacle free vehicular access from village/ habitations to all nearest market center in all weather conditions/ seasons of the year. Thus all-weather road provides the targeted habitation essential access to economic, social service resulting in generation of agricultural- horticultural income and productive employment and ensures sustainable development.

In a state like J&K, vehicular traffic is interrupted mainly due to heavy snowfall. As a matter of policy and providing immediate relief and facility to the people ORD's are cleared on the same day of snowfall while as village roads are cleared within a maximum of two days after snowfall.

Core Network

The rural road network required for providing the 'basic access' to all villages/ habitations is termed as the Core Network. Basic access is defined as one all-weather road access from each village/ habitation to the nearby Market Centre or Rural Business Hub (RBH) and essential social and economic services.

A Core Network comprises of Through Routes and Link Routes. Through routes are the ones which collect traffic from several link roads or a long chain of habitations and lead it to a market centre or a higher category road, i.e. the District Roads or the State or National Highways. Link Routes

Stage II of road from Kakawthal to Brannar

are the roads connecting a single habitation or a group of habitations to Through Roads or District Roads leading to Market Centres. Link Routes generally have dead ends terminating on habitations, while Through Routes arise from the confluence of two or more Link Routes and emerge on to a major road or to a Market Centre.

The Core Network may not represent the most convenient or economic route for all purposes. However, since studies show 85-90% of rural trips are to market centres, the Core Network is likely to be a cost-effective conceptual frame work for investment and management purposes, particularly in the context of scarce resources.

The Sub-project *Kakawthal to Brannar*, is a link road with Code 3.2 in *Wagoora* block of *Baramulla* District. This road directly connects the habitations of *Brannar* with total populations of 1332 as per 2000 census.

Geography

Road is partly in plain area and partly in rolling terrain. Road is mostly in cutting and at spots filling, and type of soil is hard and soft soil.

Climatic Condition

The Climate of the area is usually moderate in nature. In summer the temperature ranges from max 35 ° C, and min 15 ° C. In winters snow covers whole Block for at least four months, with the temperature max 10 ° C, and min -5 ° C.

The Sub-Project Road

The road passes through rolling/hilly terrain

The road is completely hilly in nature. Since road is a new connectivity there is no prominent existing cross drainage structure along the alignment, however utilities like electric poles, and water pipelines exist along the alignment of road. In addition to it few mosque and a school lies alongside of the alignment of the road.

District:	Baramulla
Block:	Wagoora
Road Name:	Kakawthal to Brannar
Road Code:	L039
Package No:	JK03
Road Length:	3.2 Km
Start Point:	Longitude 74°28'38.67"E & Latitude 34° 3'4.31"N
End Point:	Longitude 74°29'40.39"E & Latitude 34° 2'27.46"N

Stage II of road form Kakawthal to Brannar

Table 1—1 Habitation

Sl.No.	Habitation benefited	Population benefited	Chainage (Km)	
		Direct/Indirect	From	To
1	Brannar	Direct	0.00	3.0

2. Planning and Basic Design Consideration

Key maps

Figure 2-1 Key Map

Key map Attached as Annexure 5a

Preliminary alignment investigation

Strip Plan Attached as Annexure 5b

Site Photographs

Site Photographs are included as annexure 5c

Road Design Brief

Table 2—1 Design Brief

Sl.	Location	Issue	Design Solutions
1			
2			
3			
4			
5			
7			
8			
9			
10			
11			

Transect Walk Summary

- Total No. of People present for the Transect walk :
Male : 10 , Female: 2 , Total : 12
- Demographic information where the Walk was conducted :
- No. of Govt. Employees present : 7
- No. of Contractors Employees : nil
- No. of participants from Minority community :
SC: nil , ST: nil , Women: nil
- Enclose a separate sheet with names, designation (if Govt. Employee, or Elected Representative) and Signatures of participants of transect walk

Checklist

Transect walk done

Yes ☒

No ☐

Transect walk summary table included

Yes ☒

No ☐

Photographs taken

Yes ☒

No ☐

Stage II of road from Kakawthai to Brannar

Major changes in alignment perceived
Design brief provided

Yes ☐
Yes ☒

No ☒
No ☐

3. Topographic Survey

General

Topographic survey true to ground realities have been done using auto levels and prismatic compass.

The in-house standards, work procedures and quality plan prepared with reference to IRC: SP 19-2001, IRC: SP 20, IRC: SP 13 (in respect of surveys for rivers/streams) and current international practices have been followed during the above survey.

Traversing

Traversing was done using Prismatic compass having least count of 15'

Leveling

Leveling was done using Auto Level and staff of 5mm least count

Cross Section & Detailing

Cross sections were taken at 50 m interval and at 5 m interval in curved portion of the existing road. All physical features of the road were recorded.

Data Processing

All data from topographic survey were manually processed and Cross Sections developed using AutoCAD.

Checklist

Reference pillars given

Yes ☐

No ☒

TBM with northing-easting given

Yes ☐

No ☒

Traverse survey carried out

Yes ☒

No ☐

Cross section and detailing carried out

Yes ☒

No ☐

4. Soil and Materials Survey

General

The soil and material investigations were done following the guidelines of IRC: SP: 20-2002 and IRC: SP: 72-2007 and other relevant IS codes. The potential sources of borrow areas for soil and quarry sites will be identified.

Soil sample collection and Testing

Soil samples will be collected along and around the road alignment at three (3) locations per km, from the adjoining borrow areas, as well as one sample is collected from the existing road. Soil Classification tests like grain size analysis and Atterberg's limit were conducted for all the samples collected. Standard Proctor test and the corresponding 4 day soaked CBR test were conducted either for a minimum of one test per km for soil samples of same group or more tests due to variation of soil type. The following tests were conducted as detailed below:

Stage II of road from Kakawthal to Brannar

- Grain size analysis as per IS : 272 (Part 4) – 1985
- Atterberg's limit as per IS : 2720 (Part 5) – 1985
- Standard Proctor density test as per IS : 2720 (Part 7) – 1980
- 4 day soaked CBR test as per IS : 2720 (Part 16) – 1985

The test have already been conducted on the said road i.e "Kakawthal to Brannar" and are attached in relevant Anexure

Coarse and Fine Aggregates

Information regarding the source of aggregate and sand will be gathered. The stone aggregates shall be procured from Various Sources as indicated in attached carriage chart. The source and the lead distance from the quarry to project site will be finalized in discussion with the PIU. The aggregates and sand where available and acceptable shall be used for bituminous work, concrete works, other pavement works.

Sub-soil investigation for bridges

(Not applicable)

Checklist

Borrow pit suitable
SSI for existing ground
Investigation for coarse/fine aggregate
Quarry map

Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

5. Traffic Survey

General

In the present scenario of new connectivity/upgradation road, 3 day, 24 hr traffic volume count has been conducted on the already completed or similar type of PMGSY road in the vicinity of the project road. The Classified Volume Count survey has been carried out in accordance with the requirements of the TOR and relevant codes (IRC: SP: 19-2001, IRC: SP: 20, IRC: SP: 72-2007). The surveys have been carried out by trained enumerators manually under the monitoring of Engineering Supervisor.

Traffic Data and Analysis

The traffic count done was classified into different vehicle category as given below:

- Motorized vehicle comprising of light commercial vehicle, medium commercial vehicle, heavy commercial vehicle, trucks, buses, agricultural tractors with trailers, car, jeep, two wheelers etc.
- Non- motorized vehicles comprising of cycle, rickshaw, cycle van, animal drawn vehicle etc.

The number of laden and un-laden commercial vehicles was recorded during the traffic counts. Traffic volume count for this project road was done during Spring season. The seasonal variation 90 Days is based on local enquiry.

Average of 3 day traffic data is presented in Relevant Annexure

6. Hydrological Survey

General

Hydrological survey is necessary for design of adequate and safe Cross Drainage Structures so that the rain water can pass as per natural slope. Hydrological survey of the proposed road is based on the following observations:

- Rainfall Data
- Catchments Area
- Time of Concentration
- Existing Cross Drainage Structures

Rainfall Data

Rainfall Data as applicable for the project road were collected with maximum rainfall occurring in the months of March April and May.

Catchment Area

The Catchments area is calculated by gathering local information and topographical survey data as it was not possible to calculate from topographical sheets due to their unavailability.

Time of Concentration

Time of concentration (tc) in hours is calculated from the formula of $(0.87 \times L^3 / H)^{0.385}$, where L is

Stage II of road from Kakawthal to Brannar

distance from the critical point to the structure site in km and H is the difference in elevation between the critical point and the structure site in meters.

Existing Cross Drainage Structures

There is 1 number of cross drainage structures along the existing project road as listed below:

Table 6—1 List and condition of existing culverts

Sl.	Chainage (m)	Description of Existing Structure		
		Type	Span/ Dia. (m)	Condition
1				
2				
3				
4				
5				
6				
7				

7. Adopted Geometric Design Standards

General

The geometric design standards for this project conform to PMGSY guidelines and the guidelines as stated in IRC-SP 20:2002. Recommended design standards vis-à-vis the standards followed for this road are described below

Terrain

The classification of terrain was selected from plain/rolling/hilly/steep classification for which following criteria will be applicable.

Table 7—1 Terrain Class

Terrain classification	Cross slope of the country	
Rolling	10-25%	1 in 10 to 1 in 4

Design Speed

The proposed design speed along this project road will be selected from the following table:

Table 7—2 Design Speed

Road classification	Rolling terrain	
	Ruling	Min.
Rural Roads (ODR and VR)	40	35

Right of Way (ROW)

The requirement of ROW for this road is as follows (as specified in IRC-SP 20:2002):

Table 7—3 Right of Way

Road classification	Plain and Rolling Terrain
---------------------	---------------------------

Stage II of road from Kakawthai to Brannar

	Open Area		Built-up Area	
	Normal	Range	Normal	Range
Rural roads (ODR and VR)	15	15-25	15	15-20

Roadway Width

Roadway width for this road is given below:

Table 7—4 Roadway Width

Terrain Classification	Roadway Width (m)
Plain and Rolling	7.5

Carriageway Width

The width of carriageway for this project road is 3.75 m.

Shoulders

It is proposed to have 1m wide shoulder as the case may be on both sides of which at least 0.875m is hard shoulder where required.

Roadway width at cross-drainage structures

The roadway width at culvert locations for this road is 7.5 m.

Sight Distance

The safe stopping sight distance is applicable in the geometric design. The sight distance values for this road as per IRC recommendations are presented below:

Stage II of road form Kakawthal to Brannar

Rolling Snow Bond	Ruling Minimum	Absolute Minimum
	25	15

To minimize extra land arrangement, minimum radius used is 30 m and design speed in these curves are also restricted to 20 km/hr.

Curve Design

Step 1:- Superelevation

$$e = \frac{v^2}{225R}$$

Where :

- e= Superelevation in meters per Meter width of roadwidth
- V= Speed in Km/hr. (Minimum design speed at curves in Rolling/ Mountainous terrain is 20 Km /hr.
- R= Radius of curve in meters. = 30 mt

Calculating for R=40

Therefore, $e = \frac{20^2}{225 \times 40} = 0.044 < 0.07$ (max. e for plain/ rolling Terrain bound by snow)

Step 2: Curve Radius in mtrs.

$$R = \frac{v^2}{127(e+f)}$$

Where:

F= Coefficient of friction= 0.15 as per IRC SP:20 2002

Therefore

$$R = \frac{20^2}{127(0.044+0.15)} = 16.24 \text{ m} < 40$$

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Widening Psychological

$$Wp = \frac{V}{9.5R^{0.5}} = \frac{20}{9.5 \cdot 30^{0.5}} = 0.38$$

Extra Widening at Curve = $0.6 + 0.3 = 0.9$ m

Provide extra widening at Curve equal to 1m.

Step 5 Check for Lateral Skidding: =

$$\text{Centrifugal Ratio} = \frac{V^2}{gR} = \frac{20^2}{9.81 \cdot 30} = 1.36 < 1.5 \text{ (Hence Safe)}$$

Camber & Super elevation

A camber adopted on this road section is given below. The maximum super elevation is 5.0% for this project road.

Table 7—7 Camber

Surface type	Camber (%)	
	Low rainfall (Annual rainfall <1000mm)	High rainfall (Annual rainfall >1000mm)
Thin bituminous road	3.0	3.5

Vertical Alignment

The present road is in plain terrain and vertical alignment has been designed well within ruling gradient.

Generally, minimum gradient of 0.3% for drainage purpose is considered for designing the vertical alignment of this road. Vertical curves are not required when grade change is less than 1%, however a minimum vertical curve is provided to avoid vertical kink.

Vertical Curves

For satisfactory appearance, the minimum length of vertical curve for different design speed is given in IRC-SP 20:2002. Vertical curves will be designed to provide the visibility at least corresponding to the safe stopping sight distance. Valley curves will be designed for headlight sight distance.

Side slope

Side slope for this rural road where embankment height is less than 3.0m is given in the table below.

Table 7—8 Side Slope

Condition	Slope (H:V)
Embankment in silty/sandy/gravel soil	2:1
Embankment in clay or clayey silt or inundated condition	2.5:1 to 3:1
Cutting in silty/sandy/gravelly soil	1:1 to 0.5:1
Cutting in disintegrated rock or conglomerate	0.5:1 to 0.25:1

Extra Widening of Pavement

The Extra Widening of Pavement at Curve as per IRC guideline is given below:

Table 7—9 Extra width of Pavement

Radius of Curve (m)	Upto 20	21 - 60	Above 60
Extra Widening for 3.75 m wide single lane carriageway, (m)	0.9	0.6	Nil

8. Alignment Design

General

The basic aim of highway design is to identify technically sound, environment-friendly and economically feasible highway alignment. The ensuing sections deals with obligatory points, which control highway alignment, design of cross-section, highway geometric design & methodology, design of miscellaneous items.

The main components included in the highway design are:

- Cross-sectional elements
- Embankment
- Horizontal alignment
- Vertical profile
- Junctions and/or Interchanges
- Road furniture
- Miscellaneous items

Horizontal alignment

Not applicable as the project road is to widening and upgraded. the existing road alignment is well within the specified parameters as laid down in IRC SP-20 and hence the case for deviation from existing alignment is not required however minor improvements wherever required shall be carried out during execution of the work.

Checklist

- a) Centre line of the existing and proposed horizontal alignment coincide
- b) Centre line of the existing and proposed horizontal alignment Deviate at certain sections



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Vertical alignment

Table 8—1 Vertical Curve Details

Sl. NO.	Chainage (m)	Level of pvi	Length of curve	Type of curve	Grade in (%)	Grade out (%)	Grade difference (%)	Chainage		Level	
								St. of Curve	End of Curve	St. of Curve	End of Curve
1	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-

Design of Junctions

The proposed road doesn't cross any existing alignment nor forms any intersection therefore not applicable:

Table 8—2 List intersections, type and proposed modifications

Sl.	Type of intersection	Location (km)	Existing condition	Proposed modification

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Design Traffic

The average annual daily traffic (AADT) for the opening year as well as the total commercial vehicle per day (CVPD) was presented in Table 5.2.

Determination of ESAL applications

Only commercial vehicles with a gross laden weight of 3 tonnes or more are considered. The design traffic was considered in terms of cumulative number of standard axles to be carried during the design life of the road. The numbers of commercial vehicles of different axle loads are converted to number of standard axle repetitions by a multiplier called the Vehicle Damage Factor (VDF). An indicative VDF value was considered as the traffic volume of rural road does not warrant axle load survey.

For calculating the VDF, the following categories of vehicles was considered as suggested in paragraph 3.4.4 of IRC: SP: 72 – 2007.

- Laden heavy/medium commercial vehicles
- Un-laden /partially loaded heavy/medium commercial vehicles
- Over loaded heavy/medium commercial vehicles

Table 9—1 List intersections, type and proposed modifications

Vehicle type	Laden	Un-laden /Partially laden
HCV	2.86	0.31
MCV	0.34	0.02

Indicative VDF values considered 10% of laden MCV and 10% laden HCV as overloaded & given below:

Lane distribution factor (L) for Single lane road = 1.0 Cumulative ESAL application = $T_o \times 4811 \times L$, where T_o = ESAL application per day. The Cumulative ESAL application for the project road as per paragraph 3.5 of IRC: SP: 72 – 2007

Subgrade CBR

The subgrade CBR range of 2% to 2.5% was considered and the traffic falls in the T-5 category.

Design Alternatives

Design alternatives considered

Table 9—2 Design Alternatives

Chainage		Design alternatives considered						Specify design alternative selected	Justification
From	To	Pavement		Shoulder			Soil stabilization and use of locally available marginal materials.		
		Flexible	Rigid	Earthen full width	Hard Full width	Hard shoulder 0.875 m each side			
0	2575	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Pavement composition

Flexible Pavement

The designed pavement thickness and composition was calculated by referring Figure 4 (Pavement design catalogue) of IRC: SP: 72 – 2007. The ratio between heavy commercial vehicles and medium commercial vehicles as given in Chapter 5 should be maintained as far as possible.

The pavement layers provided are given below:

Table 9—3 Pavement Layers

Top Layer	Premix Carpet with Type B Seal Coat	75 mm
Base Layer	WBM Grading III & WBM Grading II	125 mm
Sub – Base Layer	Granular Sub-base Grading II	250 mm
Total thickness		450 mm

Top layer of WBM will be treated with bituminous surface.

Rigid Pavement

Not applicable

Embankment Design

Not applicable

10. Design of Cross Drainage Works

General

On the basis of hydrological survey, No new cross drainage structures are recommended for the project road. However 1 No culvert needs up gradation.

Hydrological Design

Design Feature

Design Standards for culverts has been prepared based on standard codes and guidelines of IRC: SP: 20: 2002 and similar type of ongoing projects. General features of the designed cross drainage structures are given below:

For hume pipe culvert, minimum road width has been taken as 7.5 m,

Width of culvert : 7.5 m with parapet.

Justification for retaining/widening and replacement of culverts

11. Protective Works & Drainage

General

The soil is free draining with a vegetation cover comparing of herbs shrubs and trees. The land form is mostly Glacial.

Road side drain

As the insufficient drainage of surface water leads to rapid damage of road, road side drain as shown in drawing volume has been provided particularly on the location of habitation areas.

Protective Works

Necessary protection as required are proposed in kachha Pukka Rubble Stone masonry as give in relevant Anxture.

12. Land Requirement

General

The existing road is black topped road with earthen, Partly hard and partly soft sholders. Thus the project road is as Up gradation project. The existing Right of Way (ROW) is varying from 5.5 m to

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8 m.

Proposed ROW

The width of proposed carriageway has been considered as 3.75 m in accordance with the IRC-SP 20: 2002. The total roadway width is limited to 7.5 m with 1 m earthen shoulder on either side of carriage way. The proposed ROW generally varies from 8 m – 10 m depending upon the embankment height and the proposed ROW is even less than 10 m in some stretches of habitation area and in areas having tree plantation.

Additional Land

Local administration and local panchayat need to apprise the villagers about requirement of minor areas in places for development of the road. Villagers were generally highly enthusiastic during site visits for selection of the road. However Actual additional land requirements can only be ascertained from the land record of revenue Dept.

13. Utility shifting/relocation

Existing utilities

Table 13—1 Estimated Cost for Relocation of Utilities

Sl. No.	Utility Type	Qty	Estimated Rate	Estimated Cost
1	Electric Distribution Poles	10	10000	1,00000 Rs
2	Electrical Distribution Transformers	1	50000	50000 Rs
Estimated Total Cost				1,50000 Rs

14. Traffic Management and Road Safety Measures

Road safety measures have been Taken into account By proposing cautionary and information Signage's at required spots.

Road Furniture

Road Furniture details include:

- Road markings

Stage II of road from Kakawthal to Brannar

- Cautionary, mandatory and information signs
- KM stones and 200m stones
- Delineators and object markers
- Guard posts, crash barriers and speed breakers

Road Markings

Road markings perform the important function of guiding and controlling traffic on a highway. The markings serve as psychological barriers and signify the delineation of traffic paths and their lateral clearance from traffic hazards for safe movement of traffic. Road markings are therefore essential to ensure smooth and orderly flow of traffic and to promote road safety. The Code of Practice for Road Markings, IRC: 35-1997 has been used in the study as the design basis. Schedules of Road Markings are included in contract drawings.

Cautionary, Mandatory and Informatory Signs

Cautionary, mandatory and informatory signs are provided depending on the situation and function they perform in accordance with the IRC: 67-2001 guidelines for Road Signs.

Overhead signs are proposed in accordance with IRC: 67-2001.

Kilometer Stone and Hectometer Stone

The details of kilometer stones are in accordance with IRC: 8-1980 guidelines. Both ordinary and fifth kilometer stones are provided as per the schedule. Kilometer stones are located on both the side of the road.

Delineators and Object Markers

Roadway delineators are intended to mark the edges of the roadway to guide drivers on the alignment ahead. Object markers are used to indicate hazards and obstructions within the vehicle flow path, for example, channelizing islands close to the intersections.

Delineators and object markers are provided in accordance with the provisions of IRC: 79-1981. They are driving aids and should not be regarded as substitutes for warning signs, road markings or barriers.

Temporary traffic control

The road under consideration has to be widened along with the culvert. The list below provides the c/d structures to be widened/reconstructed and temporary traffic control measures to be implemented.

Table 14.3 gives the section-wise details of temporary traffic control measures to be adopted.

Checklist for Road Safety Measures

Stage II of road from Kakawthal to Brannar

- a A minimum 100 mm thickness of pavement GSB layer constructed to the full roadway width.
- b The upper layer of all shoulders of sub-base quality compacted to a minimum thickness of 100 mm.
- c Shoulder side slopes are not to be steeper than 2H:1V unless stone pitching of the slope is provided.
- d Speed breakers as per NRRDA circular comply with the requirements of IRC:99-1988 for general traffic.
- e Speed breakers placed at the threshold of a habitation and at regular intervals (150 - 200 m) through the habitation.
- f Within densely populated habitations, a cement concrete (CC) pavement or V-shaped side drain is constructed to the full width of the available roadway.
- g Within habitations, wherever deep side drains are constructed either within or adjacent to the roadway, is covered by slabs laid level with the adjacent pavement and capable of being manually removed.
- h In habitations where child playing areas border the road, a low profile wall, raised kerb or similar form of boundary marking (depending on the site conditions), is constructed to create a physical boundary and act as a deterrent to the random movement of a child onto the road.
- i On roads where, because of the lack of dry land in the general area, the shoulder will be continually occupied and only intermittently available for traffic, speed breakers are installed at regular intervals, not more than 300 m apart, for the entire length of the road.
- j The drawings show all obstructions in the proposed road shoulder with a note that the obstruction is to be removed.
- k If a shoulder obstruction cannot be removed, hazard markers are installed to mark the Obstruction
- l Hazard markers are installed at all pipe culvert headwalls.
- m Hazard markers are installed at each end of all box culverts, river crossing causeways and similar CD structures.
- n Hazard markers are installed at any discontinuity in the shoulder.
- o Directional sight boards are installed on all sharp curves and bends.
- p Speed breakers are provided at sharp curves and bends where the curve design speed is less than 40 km/h in plain and rolling terrain, and less than 25 km/h in mountainous and steep terrain.
- q Speed breakers are provided and directional sight boards installed at sites where reverse horizontal curves are closely spaced and speed reduction is required.
- r At a main road intersection, signs and pavement markings for STOP control on the PMGSY village road are installed, side road warning signs on the main road and intersection warning signs on the village road are installed, and speed breakers on the PMGSY village road are provided as given in the figures (refer IRC 99-1988).

Road safety issues identified during the design were and the mitigation measures are included in all designs and shown on the DPR drawings.

15. Specification

General

The "Specification for Rural Roads" published by IRC on behalf of the Ministry of Rural Development, Govt. of India has been followed.

Construction Equipment

Construction by manual means and simple tools has been considered for the project as per the guideline of NRRDA. For handling of bulk materials like spreading of aggregates in sub-base & base courses by mix-in-place method, use of motor grader & tractor-towed rotavator has been allowed in line with the schedule of rate for PMGSY work. Compaction of all items shall be done by ordinary smooth wheeled roller if the thickness of the compacted layer does not exceed 100 mm. It is also considered that, hot mix plant of medium type & capacity with separate dryer arrangement for aggregate shall be used for bituminous surfacing work that can be easily shifted. A self-propelled or towed bitumen pressure sprayer shall be used for spraying the materials in narrow strips with a pressure hand sprayer. Now the vibratory rollers are also being used for rapid progress.

For structural works, concrete shall be mixed in a mechanical mixer fitted with water measuring device.

The excavation shall be done manually or mechanically using suitable medium size excavators.

Construction Methods

Preparation for Earthwork

After setting out existing ground shall be scarified to a minimum depth of 150 mm and leveled manually and compacted with ordinary roller to receive the first layer of earthwork. In filling area, existing embankment will be generally widened on both sides as per the alignment plan. Continuous horizontal bench, each at least 300 mm wide, shall be cut on the existing slopes for bonding with the fresh embankment/ subgrade material as per CI 301.7.

Embankment work

Material from borrow pits will be used for embankment construction as well as the approved material deposited at site from roadway cutting and excavation of drain & foundation may be used. Layer of the earth shall be laid in not more than 25 cm (loose) thick layers & compacted each layer of the soil up to 30 cm below the subgrade level at OMC to meet 97% of Standard Proctor Density.

Material for embankment and sub-grade shall satisfy the requirements of Table 300-1 and 300-2 as per the Specification for Rural Roads.

Sub-grade

Material from borrow pits will be used for construction of top 30 cm as sub-grade. Soil in these sections is quite good for road construction. Top 30 cm upto the subgrade level and shoulder at OMC to meet 100 % of Standard Proctor Density by proper control of moisture and by required compaction with a smooth wheeled roller.

Sub-base

Sub base material in the form of stone aggregates and sand as available in the area to be used in GSB Grade II layer.

Stage II of road from Kakawthal to Brannar

Base

Stone aggregates will be used in base course. 63 mm to 45 mm size (Grading 2) aggregate as been proposed for the bottom layer and 53 mm to 22.4 mm (Grading 3) size has been proposed for the top layer.

Shoulder

Earthen shoulder shall be constructed in layers and compacted to 100% of Proctor's Density. First layer of shoulder shall be laid after the sub-base layer is laid. Thereafter earth layer shall be laid with base layer of pavement and compacted.

Surfacing

Slow setting bitumen emulsion will be applied as primer on water bound layer. Emulsion shall be sprayed on surface with pressure distributor. Rapid setting bituminous emulsion shall be used for Tack coat.

Premixed carpet and mixed with equivalent viscosity grade bitumen shall be laid as surfacing course. 6 mm thick Type B seal coat is considered for sealing of the premixed carpet.

Structural Works

Following grades of concrete are proposed for Structural works and comply with MORD and IRC specifications:

- | | |
|--|------------|
| • Concrete in superstructure of slab culvert – | M-25 (RCC) |
| • Concrete in abutment cap, dirt wall of slab culverts – | M-25 (RCC) |
| • Concrete in abutment, return wall, headwall - | M-20(RCC) |
| • Concrete below abutment, return wall, headwall – | M-20(RCC) |

16. Environmental Issues

Alignment

The proposed road has planned to be designed considering the impact on environment. Proposed road alignment follows existing pathway to the maximum extent so that huge land acquisition is not necessary for construction of the project road. Proposed road, when completed, will be an addition to the aesthetics of this rural area.

Environmental Sensitive Area (National Park, Wild Life Sanctuary, Protected /Reserve Forest, Wet land etc.)

The alignment will be finalise avoiding the environmental sensitive area such as National Park, Wild Life Sanctuary, Protected /Reserve Forest, Wet land etc. It is also necessary to maintain the minimum distance of 500 m of the project road from environmental sensitive area.

Construction Camp

Stage II of road from Kakawthal to Brannar

Construction camps will be established away from forest area/water body. The minimum facilities such as water supply, sanitation, storm water drainage, solid waste management and first aid box will be provided during the construction period of the project. Necessary provision for rehabilitation or restoration after the completion of construction phase will be done.

Permit / Clearance required prior to commencing of civil work

- No objection Certificate- This will be taken by PIU from SPCB.
- Forest Department- If the project road passing thorough forest land and acquisition of the same is involved and it will be taken by PIU from Forest Department
- Consent to establish (CFE) and Consent to Operate (CFO) - This is required for Plant Hot Mix Plant, WMM Plant, Batching Plant required for the project and the same will be taken by the Contractor from SPCB.
- Lease from Mines & Geology- This will be taken by the Contractor for new Stone Quarry required for the project.

Borrow area

The filling soil will have to be procured from borrow pit. Borrow area will be so excavated that the lands can reused as agricultural field. The depth of borrow pit shall not exceed 450 mm (150 mm top soil included). The top soil shall be stripped and stacked and shall be spread back on the land. As far as possible the borrow pits shall not be dug close to the road embankment. The Redevelopment of borrow area will be done before closure of the same and it will be as per agreement between landowner and the Contractor.

Erosion Control

Turfing of the embankment slopes and earthen shoulder to prevent erosion of slopes of the embankment, rain cuts and erosion of shoulder is being suggested.

Drainage

Suitable cross drainage structures have been provided on the basis of hydrological survey of the area. So, there will be no obstruction to the natural drainage of the area. Road side drainage is also duly considered in a manner so that surface water is led to the low points and is drained through the CD structures.

Use of Material

Cut back bitumen is not proposed in the project to avoid contamination with Kerosene. Bitumen emulsion is proposed for primer coat and tack coat.

17. Analysis of Rates

General

Rates for various item of works of the project have been derived from the "Schedule of Rates 2004 for Road works, Culvert works & Carriage etc. JKRRDA and "Addendum & Corrigendum to Schedule of Rates" effective from 2016. However in general the basic rates of material have been taken from source by conducting market rate analysis. The rates of different items have been worked out inclusive of all labour charges, hire charges of Tools & Plants, Machineries and all other cost estimates for the item of work, overhead and contractor's profit @ 12.5% and 1% cess on these.

Basic Rate of Material

The basic rates for stone materials & river bed materials have been taken from source by conducting market rate analysis.

For bituminous materials, basic rate at (location) for equivalent viscosity grade bitumen and for emulsion the basic rate of (location) has been considered as suggested in from source by conducting market rate analysis.

Basic rate of other materials like coarse & fine sand, cement are as per the latest from source by conducting market rate analysis.

Basic rate of steel materials at sub-divisional office has been considered in analysis after adding cost of carriage, loading & unloading.

Lead for Materials

For stone aggregates and sand, lead from source to work site is calculated from the district map and block level map of core network and finalizing the same in discussion with PIU. The supply of different materials to worksite is by road. Lead for bituminous & steel materials are similarly obtained using SOR.

18. Cost Estimate

General

Cost Estimate of project has been arrived on the following basis

- Selection of Items of work
- Estimation of item wise quantities
- Analysis of Rates

Estimation of Quantities

Stage II of road from Kakawthal to Brannar

All the relevant road and structure work Items will be identified as per survey, design and drawings. Following major item of works considered are given below:

- Site clearance, dismantling and earthwork
- Pavement works (GSB, WBM, Bituminous layers)
- Cross drainage structure works
- Drainage and protective works
- Utility relocation
- Road safety and furniture
- Maintenance works

Quantity of earthwork will be derived from the proposed cross section drawings. Volume of cut and fill will be obtained directly using the design package software. Quantity derived from software will be manually verified. There are some stretches of the road in cut section. The details are provided chainage wise in Table-18.1 of total cut and fill volume. The soil obtained from roadway excavation shall be used for construction of embankment and shall be paid as per item no.4. All other quantities will be computed from the drawings of finished road, miscellaneous drawings & drawings of CD Structures.

Abstract of Cost

Unit rates will be derived by using the "Schedule of Rates for Road Works, Culvert works and Carriage etc. "JKRRDA". The abstract of Cost estimate is given format attached.

Maintenance

Cost of Annual Maintenance for five years after completion of project will be estimated as per the PMGSY Guidelines. Different activities of ordinary repairs are done as and when required.

19. Construction Program

General

Assuming that the Construction of the Batch – 1 roads will start from 1 April 2017 this is a high rainfall area and rainy season extends from April to May. However, the construction program is based for a total working period of 12 months, considering the program set out by MoRD. Generally, dry working season of about 8 months are required for construction of PMGSY roads. However, works will be affected for the winter season during the months Dec-March and during the rainy season of March to May.

Realistic duration

The realistic Duration of contract is 2 working seasons.

PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)

CERTIFICATE OF GROUND VERIFICATION FROM EXECUTIVE

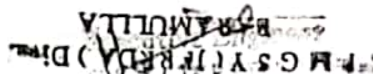
PMGSY JKRRDA Div Baramulla


ENGINEER


HEAD of PIU

1. Certified that land width for the Road is likely to be available as certified by the Panchayats.
2. Certified that no forest land is involved along the entire roadway.
3. Certified that the DPR has been checked at site by


A.E.E.


Executive Engineer
PMGSY (JKRRDA) Div
Baramulla


Superintending Engineer
PMGSY (JKRRDA) C
Baramulla


Executive Engineer
PMGSY (JKRRDA) Div
Head of PIU Baramulla

Community Consultation Checklist – Engineering

Question	Yes	No	N/a
1. Are there any flood prone areas on the road?			
If yes:			
1.1 Are locations specified and inspected?			
1.2. Is high flood level specified for each stretch?			
1.3 Are locations specified and inspected?			
2. Are there any locations on the road where irrigations ducts need to be provided?			
If yes:			
2.1 Are locations specified and inspected?			
3. Can the road be used as a shortcut by through traffic?			

4. Does the road lead to any quarries, mining areas, brick kilns, logging areas, tourist attractions etc.?			
5. Are there plans to build new schools, hospitals, temples etc			
6. Is there potential for double connectivity?			
If yes on any of 3-6:			
6.1 Is information on location, size and nature of additional traffic generators and specific routes obtained?			
7. Is there a need for deviations from existing track?			
If yes:			
7.1 Were the proposals for deviation shown on site and explained to the community?			
7.2 Is the land availability checked?			
7.3 If there is a need for donation, were the owners consulted regarding their agreement to donate the land?			
8. Is there a need for speed breakers?			
If yes:			
8.1 Is location and rationale for speed breakers identified?			
8.2 Is rationale verified and checked on site?			
8.3 Are alternative or additional locations discussed?			
9. Are all existing intersections checked with the community on site?			
9.1 Is the use of intersecting roads identified (e.g. school children, farm machinery, etc)?			
10. Are proposed culvert locations verified with the community?			
10.1 Is there a need for additional culverts?			
10.2 If yes, are locations identified?			
m			
11.1 If yes, are locations identified?			

Stage II of road from Kakawthal to Erannar

For DPR consultant	For PIU	For PIC

PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)

Format for Consolidated Report of the STA

On the Project Proposals under PMGSY.

- | 1. State: | Phase: | Year: |
|--|--------|-------|
| 2. Names of the Members of the STA involved in the Technical Scrutiny. | | |
| 3. Whether Pre-DPR meeting was held with SRRDA and DPIUs. | | |
| 4. Summary of the Project Proposals scrutinized indicating district wise and road wise details of length and cost. The summary includes the No. of Packages and total value. | | |
| 5. Whether schedule for scrutiny was fixed in advance (give details) and difficulty in adhering to schedule. | | |
| 6. Actual scrutiny process and time taken for scrutiny (Please indicate the dates). | | |
| 7. Interaction of the Engineers of the Executing Agencies with the STAs. | | |
| 8. Major deficiencies observed during scrutiny with details. | | |
| 9. Reliability of data obtained through investigations and used in the design/ estimation. | | |
| 10. Compliance of the provisions/ instructions given in the guidelines/ circulars/ operations manual/ IRC codes etc. in the preparation of DPRs including Environmental/RR/ Road safety aspects etc. | | |
| 11. Levels of response from the Senior Engineers of the Executing Agencies for the suggestions given by the STAs for revision/ modifications in the DPRs. | | |
| 12. If DPRs outsourced, perceived level of competence of outsourced consultants and suggestions. | | |
| 13. Overall comments and impressions of the STAs, if any, on the process of the preparation of DPRs and their technical scrutiny. | | |

Signature and
Name of the Coordinator STA

PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)
CERTIFICATE OF GROUND VERIFICATION FROM EXECUTIVE ENGINEER / HEAD PIU

1. a) Certified that the Land width for the Road is available and that no additional land is required; or
b) Certified that land width for the Road is likely to be available as certified by the Panchayats.
2. a) Certified that no forest land is involved along the entire road way; or
b) Certified that the case for permission under Forest conservation Act has been moved to the Forest Department on (Date).
3. Certified that the DPR has been checked at site by

AE

EE

SE

On date

(DPR wise summary in Format F9-B)

Executive Engineer,
Head of PIU.

FORMAT F-9B

LIST OF DPRS VERIFIED ON GROUND:

#	DPRs seen on ground by	DPR Nos	% of total number
1	AE		
2	EE		
3	SE		

Head of PIU

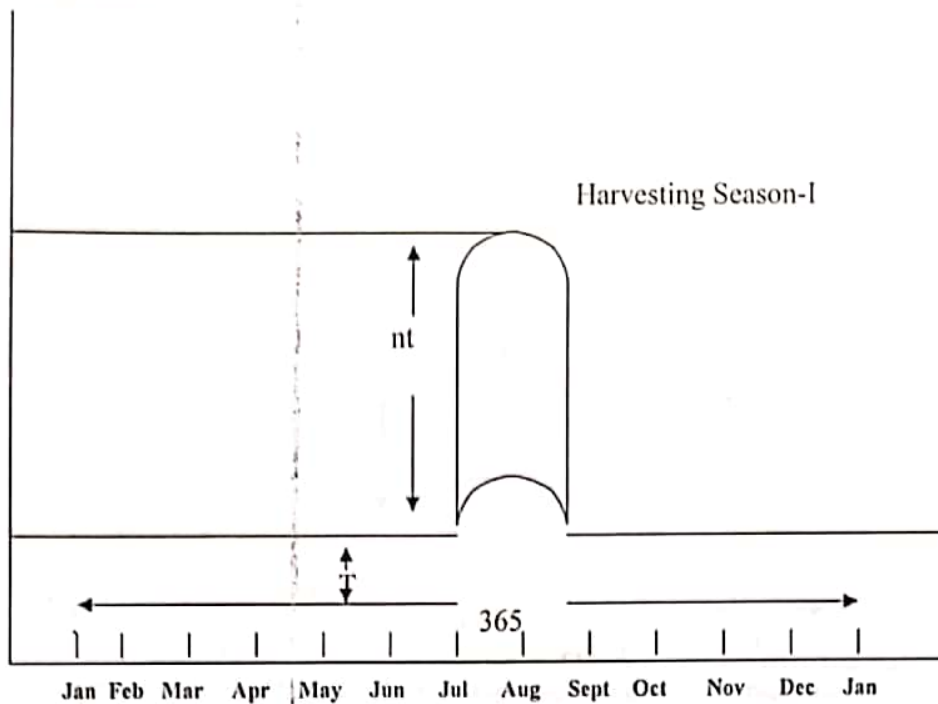
Question	Yes	No	N/a
1. Are there any flood prone areas on the road?			
If yes:			
1.1 Are locations specified and inspected?			
1.2. Is high flood level specified for each stretch?			

Stage II of road from Kakawthal to Brannar

1.3 Are locations specified and inspected?			
2. Are there any locations on the road where irrigations ducts need to be provided?			
If yes:			
2.1 Are locations specified and inspected?			
3. Can the road be used as a shortcut by through traffic?			
4. Does the road lead to any quarries, mining areas, brick kilns, logging areas, tourist attractions etc.?			
5. Are there plans to build new schools, hospitals, temples etc			
6. Is there potential for double connectivity?			
If yes on any of 3-6:			
6.1 Is information on location, size and nature of additional traffic generators and specific routes obtained?			
7. Is there a need for deviations from existing track?			
If yes:			
7.1 Were the proposals for deviation shown on site and explained to the community?			
7.2 Is the land availability checked?			
7.3 If there is a need for donation, were the owners consulted regarding their agreement to donate the land?			
8. Is there a need for speed breakers?			
If yes:			
8.1 Is location and rationale for speed breakers identified?			
8.2 Is rationale verified and checked on site?			
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9. Are all existing intersections checked with the community on site?			
9.1 Is the use of intersecting roads identified (e.g. school children, farm machinery, etc)?			
10. Are proposed culvert locations verified with the community?			
10.1 Is there a need for additional culverts?			
10.2 If yes, are locations identified?			
m			
11.1 If yes, are locations identified?			

COMPUTATION OF DESIGN TRAFIC

Name of the Road:



MONTH OF THE YEAR

Average daily traffic (ADT)
as per form (C)

$$T=100$$

Base Year Traffic (AADT)

$$= T + \frac{1.2nT}{365} = 100 + \frac{1.2 \times 1 \times 100 \times 62}{365} = 120$$

(AADT) at the time of opening the road to traffic after 2Years

$$= 120 \times (1+0.06)^2 = 135$$

Proportion of HCV and MCV out of ADT at the time of opening the road to traffic

$$\begin{aligned} \text{HCV} &= \frac{50}{100} \times \text{AADT} \\ &= \frac{50}{100} \times 120 = 60 \\ \text{MCV} &= \frac{45}{100} \times \text{AADT} \\ &= \frac{45}{100} \times 120 = 54 \end{aligned}$$

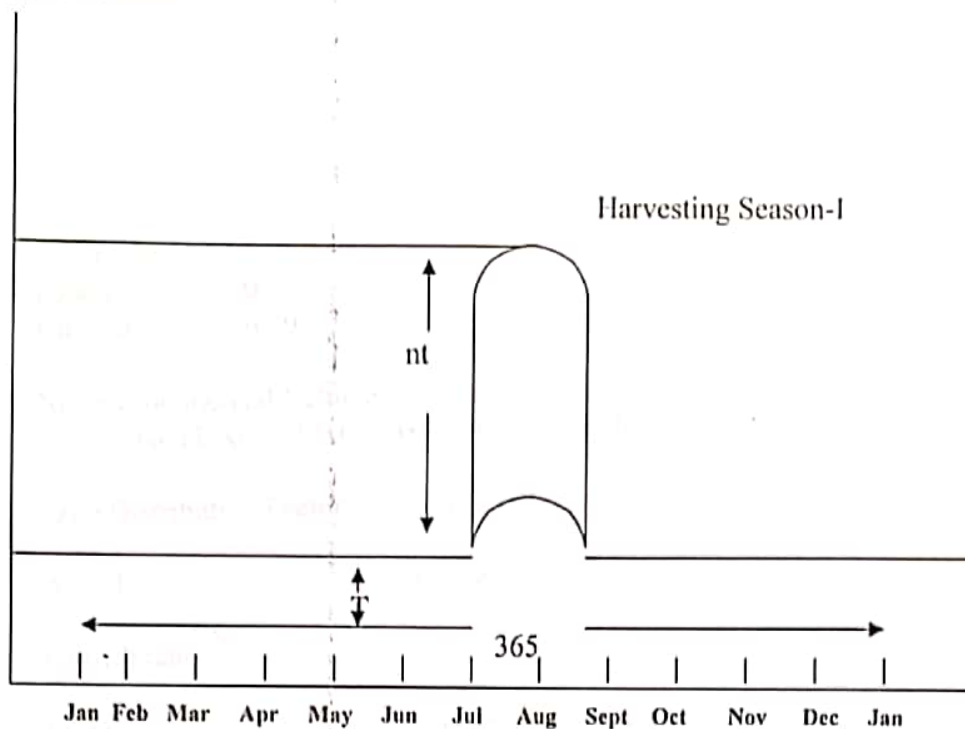
Value of $n=1$

Growth rate $r=6\%$

No. of harvesting season=1

COMPUTATION OF DESIGN TRAFIC

Name of the Road:



MONTH OF THE YEAR

Average daily traffic (ADT)
as per form (C)

$T=100$

Base Year Traffic (AADT)

$$= T + \frac{1.2nTt}{365} = 100 + \frac{1.2 \times 1 \times 100 \times 62}{365} = 120$$

(AADT) at the time of opening the road to traffic after 2Years

$$= 120 \times (1+0.06)^2 = 135$$

Proportion of HCV and MCV out of ADT at the time of opening the road to traffic

$$\begin{aligned} \text{HCV} &= \frac{50}{100} \times \text{AADT} \\ &= \frac{50}{100} \times 120 = 60 \\ \text{MCV} &= \frac{45}{100} \times \text{AADT} \\ &= \frac{45}{100} \times 120 = 54 \end{aligned}$$

Value of $n=1$

Growth rate $r=6\%$

No. of harvesting season=1

DETERMINATION OF ESAL APPLICATION

H C V

Laden = 13

Un-laden = 12

M C V

Laden = 14

Un-laden = 10

V.D.F. for HCV

Laden = 0.3

Un-laden = 0.29

V.D.F. for MCV

Laden = 0.35

Un-laden = 0.02

No. of Commercial Vehicle

$$T_o = (13 \times 0.3 + 12 \times 0.29) + (14 \times 0.35 + 10 \times 0.02) = 11.97$$

Lane Distribution Factor, $L = 1$

Age of road 10 Years

Growth rate 6%

ESAL

$$T_o \times 4811 \times 1$$

$$11.97 \times 4811 \times 1 = 57587.67 \text{ (T3)}$$

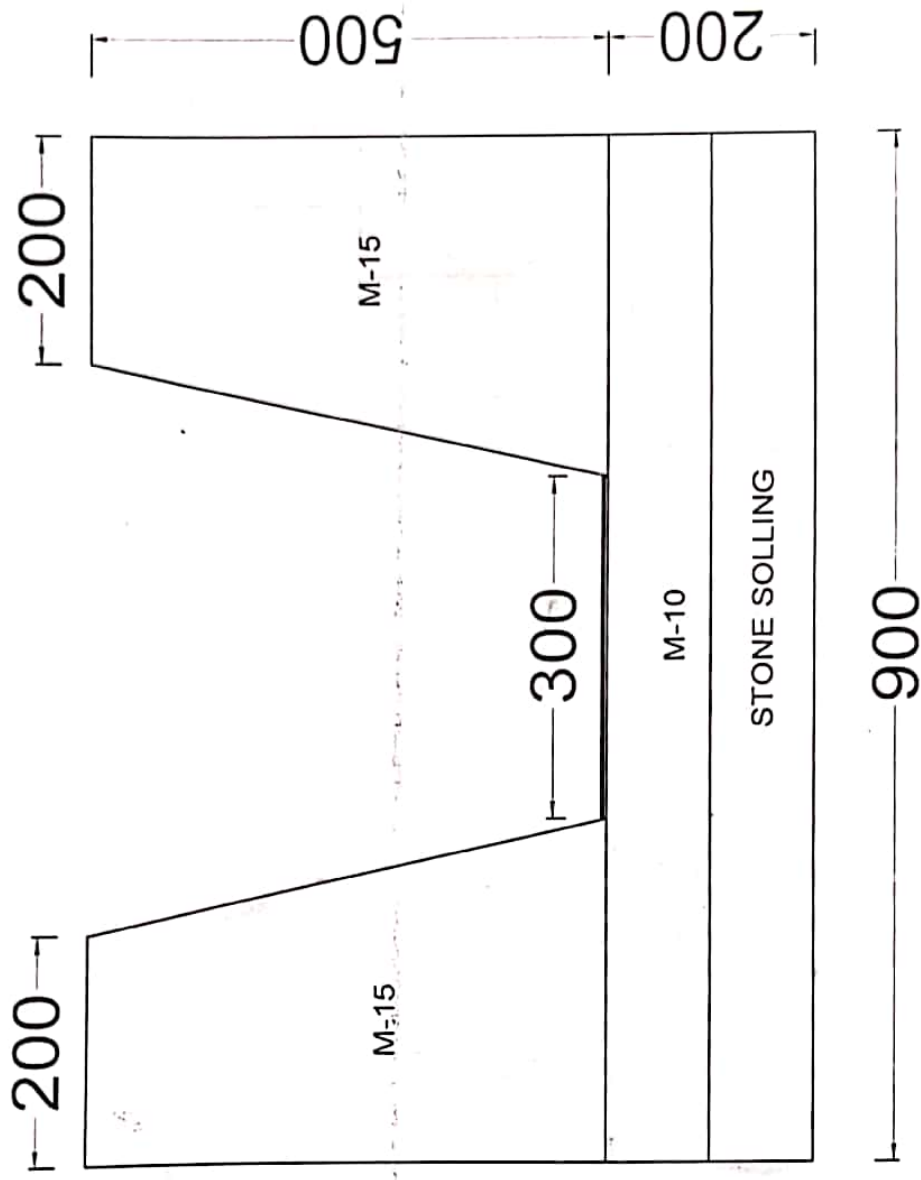
Pavement Thickness Design:

Total Cumulative ESAL Applications = 57587.67 (5,0000-1,00000)

CBR as per soil inspection = (1.5 - 2.0 %)

Total pavement thickness required as per IRC SP72-para 9 = 375 mm

Pavement thickness required = 375 mm

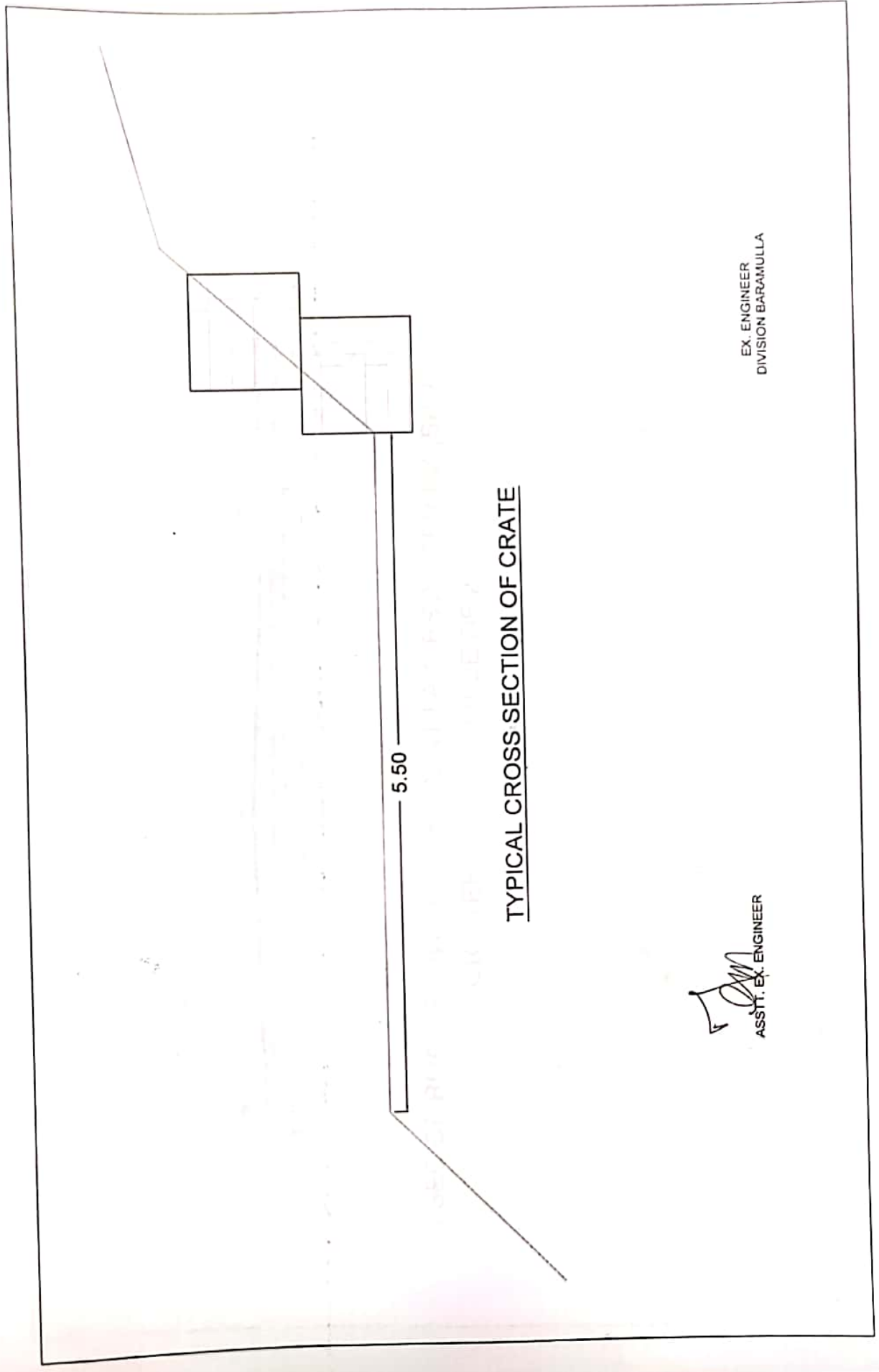


X-SECTION C.C DRAIN

[Signature]

ASTT. EX. ENGINEER

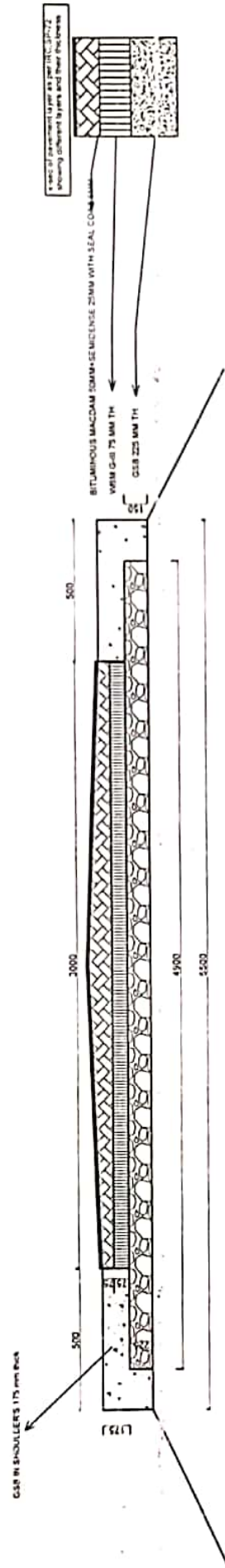
EX. ENGINEER
DIVISION BARAMULLA



TYPICAL CROSS SECTION OF CRATE


ASSTT. EX. ENGINEER

EX. ENGINEER
DIVISION BARAMULLA



X-SEC OF ROAD SHOWING DIFERRENT LAYERS AS PER IRC;SP-72
FOR AVERAGE CBR VALUE OF 2

[Signature]

ASS. EX. ENGINEER

EX. ENGINEER
DIVISION BARAMULLA

PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)													
PACKAGE SUMMARY													
Package No:		JK03.....								PROFORMA : B			
District:		Baramulla											
State:		Jammu and Kashmir											
S. No.	Name of Block	Name of Road		Type of Proposal	Proposed Length	Cost of Pavement	No of CD Works	Cost of CD Works	Total Estimated Cost		Average Cost per Km.		
		From	To	N/U	Km	Rs.		Rs.	Const.	Maint.	Const.	Main	
1	Wagoora	Kakuthal	Brannar	N	1.20	206.89 208.33	0	0.00	206.89 208.33	20.67 16.67	64.65 199.65	6.46 5.21	
Total Estimated Cost of Package:						Rs.	225.00 Lacs						

N= New Connectivity

U= Upgradation

Prepared by: Signature: *[Signature]*
 Name: En. M.D. Khan
 Designation: Executive Engineer
 PMGSY (JKRRDA) Division
 BARAMULLA
 Checked by: Signature: *[Signature]*
 Name: En. A.R. Lone
 Designation: Ex. Engineer.

Technical Scrutiny done by:

Signature: *[Signature]*
 Name: *[Signature]*
 Designation: *[Signature]*

Coordinator STA:

Scrutinized by: Signature: *[Signature]*
 Name: Superintending Engineer
 PMGSY (JKRRDA) Circle
 Baramulla
 Designation: Baramulla

Signature: *[Signature]*
 Name: FAYAN AHMED MIR
 Associate Professor IIT Srinagar
 Co-ordinator State Technical Agency
 The PMGSY, Kashmir - 191 001
 Designation:

PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)

CHECK LIST FOR P.I.U & S.T.A

(For Individual road works)

To be filled by PIU

1. Location:-	State:- Jammu & Kashmir	District: Baramulla	Block: Wagoora
2. Package No.	JK-03		
3. Name of the Road:-	From: Kakuthal	To: Brannar	
4. Total length (Km):-	3.20 Kms	In Built Up Area:- 2.00 Km	In Open Area:- 1.20 Km
5. Estimated Cost	200.33 Lacs	Cost per Km: Rs. 64.65	65.10 Lacs
6. Type of Proposal:-	206.89	New Connectivity / Upgradation	New Connectivity
⇒ If the proposed road is a New Connectivity		Yes / No	Yes
⇒ Is the road a part of Core Network			
⇒ Name of the unconnected Target Habitation (s) (to be cross checked with CN-6)		Brannar	
⇒ Does Proposed Road Lead up to the Habitation for which it is supposed to provide connectivity (In other words are you sure that the road is not being made partially?)		Yes / No	Yes
⇒ Does the proposed road connect the unconnected Habitation to: Brannar			
(A) Another habitation having All- Weather Road.		(A) N.A.	(B) N. A.
(B) Directly to an All Weather Road.			
If (B) indicate the nature of Road to which the proposed road leads.		RR	MDR
⇒ If the proposal is for upgradation			No
⇒ Is the road a part of the core network		Yes / No	Yes
⇒ Is it associated Through Route or Not			No
In case it is not Associated Through Route, whether.....			
⇒ PCI has been done		Yes / No	
⇒ Age of the Road given			
⇒ Is it certified that there are no other un connected Eligible			
⇒ Population Sub served by the Proposed Road:			
7	a) Whether the Proposed Road has the desired carriage way width, Roadway width and Road Land width (RLW).	Yes / No	Yes
	b) Indicates the actual widths of the following for the proposed road	In the Built Up Area (m)	In the Open Area (m)
	a) Carriageway	3.00	3.00
	b) Roadway	5.50	5.50
	c) Road Land Width	7.50	7.50
INDEX MAP (not to scale):			
HPC 1000mm Dia		HPC 1000mm Dia	HPC 1000mm Dia

8. Base Year Traffic Volume											
Bus/Truck	CV/Mini Bus	Car/Jeep/ Vans	Three Wheelers	Two wheelers	Cycle Rickshaw	Cycles	Bullock Carts	Pedestrian	Motorised	Non Motorised	
4	5	5	5	8	0	20	9	34	39	29	
9	Growth rate adopted (%)		5%		Projected Traffic:-			CVPD			39
10	Subgrade CBR:-										
Chainage		Km 1st		Km 2nd		Km 3rd		Km 4th			
Design CBR %		2.0%		2.0%		2.0%		1.5%			
11	Cost Details								Cost (Rs. in Lacs)		
A. Clearing and Grubbing											
B. Pavement Components											
For Black Top						For Unsealed					
Item		Thickness (mm)		Cost. (Rs.)		Item		Thickness (mm)		Cost. (Rs.)	
Earth Work						Earth Work					
G.S.B.		0.225 (Av)		59.06		SubGrade Preparation:		0.30		3.19	
WBM Gr - I						Wearing surface					
WBM Gr - II											
WBM Gr - III		0.075		22.85							
C. Bituminous Layers											
Prime Coat								Rs.		5.86	
BM / BBM								Rs.		44.15	
Tack Coat								Rs.		1.68	
MSS											
25mm Semidense with Seal Coat								Rs.		34.06	
D. CD Works:-											
No. of Existing CD Works Nil											
Do they require any Improvement. YES/NO N.A.											
If yes, their number and cost of Improvement. Rs. 0.00											
No. of Proposed CD works. 0											
Cost of Proposed CD Works 0.00											
E.	Protection Works; Crate			Length.	-100.00-	RM	Cost	Rs.	-10.58-		
F.	Shoulders:							Rs.	-5.78-		
G.	Side Drains (if Provided)			Length.	-750.00/1143	RM	Cost	Rs.	20.48-		
H.	Road Logo, other Road Furniture						Cost	Rs.	0.80		
I.	Any other Provisions (Please Specify)			DPR Prep. Surveying / Investigation.			Cost	Rs.	0.14		
Total Project Cost								Rs.	-208.33 206.89		
								Cost		/ 0 % of Const Cost.	
Year I								10%	-1.07 2.07		
Year II								15%	-2.50 2.10		
Five Year Routine Maintenance Year I to Year V @ 8%											

4.32
30.76

TO BE FILLED BY S.T.A.

Name of S.T.A:

NIT Srinagar

IN

15	If the Proposal is for new connectivity		
	Have you satisfied yourself that the proposed road is a part of Core Network.	Yes/No	
	Is the unconnected habitation(s) part of list of unconnected habitations as per CN-6	Yes/No	
	Does the Proposal ensure full connectivity	Yes/No	
16	If Proposal is for new connectivity:		
	Engineering Surveys	Yes/No	
	Soil/Material Investigation.	Yes/No	
	Traffic Survey Estimation	Yes/No	
	Hydraulic Studies.	Yes/No	
17	Is the design of the following elements as per rural roads manual:		
	Alignment and geometrics	Yes/No	
	Pavement Design	Yes/No	
	CD works and Protection Measures.	Yes/No	
	Side Drains.	Yes/No	
	Drainage Layers.	Yes/No	
18	Is the design of the following elements as per rural roads manual:		
19	Does Proposals have provision for:-		
	PMGSY Logo Sign Boards.	Yes/No	
	Km/Hm Stones.	Yes/No	
	Guard Stones (Where necessary)	Yes/No	
	Traffic Sign Boards	Yes/No	
	5 Year routine maintenance, estimated on Lump Sum basis.	Yes/No	
20	Specific remarks, if any, by STA.		

DPR is for stage II for N-connectivity Roads
c.c Drain is also provided and on the advice of
SOM, additional protection work is also included

Terrain is Rolling..

Certified that the Design and Estimation for the Proposed Roads works are based on the data and SSR provided by Engineers. The Proposal may be cleared.

Technical Scrutiny:

Done by

Bo M. Mir
Bo F. Mir

Signature:

Name:

Co-ordinator:

S.T.A.

PAVIT SINGH MIR
Srinagar

Signature:

Name:

TO BE FILLED BY S.T.A.

Name of S.T.A:

NIT Srinagar

'N'

15	If the Proposal is for new connectivity		
	Have you satisfied yourself that the proposed road is a part of Core Network.	Yes/No	
	Is the unconnected habitation(s) part of list of unconnected habitations as per CN-6	Yes/No	
	Does the Proposal ensure full connectivity	Yes/No	
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	Soil/Material Investigation.	Yes/No	
	Traffic Survey Estimation	Yes/No	
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	CD works and Protection Measures.	Yes/No	
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	Km/Hm Stones.	Yes/No	
	Guard Stones (Where necessary)	Yes/No	
	Traffic Sign Boards	Yes/No	
	5 Year routine maintenance, estimated on Lump Sum basis.	Yes/No	
20	Specific remarks, if any, by STA.		
	<p>DPR is for stage II' for N-connectivity Roads c.c Drain is also provided and on the advice of SOM, additional protection work is also included Terrain is Rolling..</p>		

Certified that the Design and Estimation for the Proposed Roads works are based on the data and SSR provided by Engineers. The Proposal may be cleared.

Technical Scrutiny:

Done by

Signature:

Name:

for M. Min
for S. R. Min

Co-ordinator:

S.T.A.

Signature:

Name:

[Stamp: P.A.T. Srinagar, Assistant Engineer, District Engineer, Srinagar]
[Signature]

PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)
SUMMARY SHEET

Name of the Block	Code	Total No of Habitations	Unconnected Habitations					Total Eligible Habitations
			>1000	500-999	250-499		<250	
Wagoora		1			Total	Eligible		1
					476	476		
Type of Proposal	No of Roads	Total Length of Roads (Km)	No of new CD Structures	Estimated Cost (Rs. in Lacs)			No of unconnected Habitations connected / connected habitations benefitted	
				Pavement from Format F-5	CD Structure from Format F-6	Total (5) + (6)		
1	2	3	4	5	6	7	8	
New Connectivity	1.00	4.00	0.00	206.89 208.33	0.00	206.89 208.33	1.00	1.00
				Dr of N ^o connectivity is 208.33 lacs.				
				Dr of N ^o stage-II is 208.33 lacs.				
				Dr of N ^o proposal for Rs 208.33 lacs.				
				checked				
Total					206.89	206.89	1.00	1.00

PAID BY THE GOVT OF INDIA
ASSISTANT ENGINEER
PMGSY DIVISION BARAMULLA

Assistant Executive Engineer
PMGSY Sub-Division 1st Pattan

Executive Engineer
PMGSY DIVISION BARAMULLA

PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)

ROADS PROPOSED IN PMGSY FOR RURAL CONNECTIVITY (PAVEMENT WORKS)

District		Baramulla					Package No: JK-03																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
S.N	Name of Block	Name of Habitations Connected		/Associated Through route(A) / Upgradation (U)			Facility Accessed	Road Length	Existing Surface Type	Details of Thickness (mm) and Cost of Pavement Layers (Rs. in Lacs)												Total Cost of Pavement (Rs. in Lacs)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		From	To	(N)	(A)	(U)				Details	Clearing Grubbing	Earthwork	Sub Grade Preparation	Sub Base GSB GR II	WBM G 2	WBM G 3	B.O.E. Edging/ Protec. Works.	K.C. Drain / Cut Stones	Primer and Tack Coat	P.C.	semiden se Seal coat		Surface Dressing	Road Furniture & Misc. Item																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
1	Wagoora	Kakulhal	Brannar	N	5A	5B	5C	6	7	8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												</

[Signature]
 Assistant Executive Engineer
 PMGSY Sub-Division 1st Pattan

[Signature]
 Executive Engineer
 PMGSY(JKRRDA)Division
 Baramulla.

PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)

ROADS PROPOSED IN PMGSY FOR RURAL CONNECTIVITY (PAVEMENT WORKS)

District		Baramulla					Package No: JK-03																			
S.N	Name of Block	Name of Habitations Connected		/Associated Through route(A) / Upgradation (U)			Facility Accessed	Road Length	Existing Surface Type	Details of Thickness (mm) and Cost of Pavement Layers (Rs. in Lacs)												Total Cost of Pavement (Rs. in Lacs)				
		From	To	(N)	(A)	(U)				Details	Clearing Grubbing	Earthwork	Sub Grade Preparation	Sub Base GSB GR II	WBM G 2	WBM G 3	B.O.E. Edging/ Protec. Works.	K.C. Drain / Cut Stones	Primer and Tack Coat	Surface Dressing	P.C. semiden se Seal coat		Road Furniture & Misc. Item			
1	Wagoora	Kakulhal	Brannar	N				3.2																		208.33

[Signature]
 Assistant Executive Engineer
 PMGSY Sub-Division 1st Pattan

[Signature]
 Executive Engineer
 PMGSY(JKRRDA)Division
 Baramulla.

Pradhan Mantri Gram Sadak Yojana (PMGSY)
Road Proposed in PMGSY for Rural Connectivity (X- Drainage Structures)

Package No: JK-03

Block: Baramulla

District: Baramulla

Sl. No	Name of Road	New Const/ Upgradation (Use N/U)	Road length (Km)	Existing CD Structures by Type												Details of Proposed CD Structures by Type												Total Cost of Proposed CD Str.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
				H.P Culvert		Slab Culvert		M. Bridge		Causeway		Scupper		Pipe Crossing		Details																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
				No.	Dia. mm	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m		No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.	L m	No.

[Signature]
 Assistant Executive Engineer
 PMGSY Sub-Division 1st Pattan

[Signature]
 Executive Engineer
 PMGSY (JKRRDA) Division
 Baramulla.

FORMAT FB
PRADHAN MANTRI GRAM SADAK YOJNA (P.M.G.S.Y.)
ROADS PROPOSED FOR CONSTRUCTION FOR RURAL CONNECTIVITY (PAVEMENT LAYERS)
JAMMU & KASHMIR STATE

(MAINTENANCE COST)

Maintenance	Total Estimated Cost	Percentage of Estimated Cost	Total Cost
First Year to Fifth Year	208.33	8%	16.67


 Assistant Executive Engineer
 PMGSY Sub-Division 1st Pattan


 Executive Engineer
 PMGSY DIVISION BARAMULLA

**RURAL ROADS UPGRADATION PROJECT UNDER PRADHAN MANTRI GRAM SADAK
YOJANA**

BAR CHART SHOWING PHYSICAL TARGETS WITH RESPECT TO TIME

CONSTRUCTION OF ROAD FROM KAKUTHAL BRANAR(Package No.:JK03)

[illegible]

CONSTRUCTION OF ROAD FROM KAKUTHAL TO BRANNAR
LENGTH OF ROAD: 3.2 KMS **PACKAGE NO.:**
BLOCK : WAGOORA **DISTRICT : BARAMULLA**

PROJECT COST

S.No.	Description of Item	No.	L (M)	B (M)	D/H (M)	Quantity	Unit	Rate (Rs)	Amount (Rs. In Lacs)
1	2	3	4	5	6	7	8	9	10
1	Loosening of ground up to level of 300mm below the sub grade level, watered, graded and compacted in layers to meet requirement of tables 300.1 and 300.2 for sub grade construction as per T.S Clause 303.5.2.	-	-	-	-	5209.50		61.32	3.19
2	Construction of Granular Sub-Base/base/surface course with local materials (Table 400.13) by mix in place method normal construction of granular sub-base by providing local material spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at once and compacting with smooth wheel roller to achieve the desired density complete as per clause 401.4 as per technical specification clause 408.	-	-	-	-	3907.13	CUM	1511.64	59.06
3	Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with three wheel 80-100 kN static roller in stages to proper grade and camber, applying and brooming, crushable screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 3 as per Technical	-	-	-	-	846.38	CUM	2699.89	22.85
4	P/L priming coat with bitumen on prepared surface @0.70-1.0 kg/Sqm.	-	-	-	-	9942.50	Sqm	58.96	5.86
5	P/L tack coat over bit. Mac.	-	-	-	-	9942.50	Sqm	16.92	1.68
6	P/L Bit. Mac. With hot mix plant with paver 500.404.	-	-	-	-	564.25	CUM	7825.14	44.15
7	P/L 25mm thick semi dense carpet	-	-	-	-	9942.50	Sqm	264.14	26.26
8	P/L seal coat IRC type-B.	-	-	-	-	9942.50	Sqm	78.46	7.80
9	Hard shoulder: Construction of Hard with approved material obtained from Nallah /Quarry	-	-	-	-	480	CUM	1200.00	5.76
Protection Works									
3	Crate Work	-	-	-	-	100.00	Rm	0.00	10.58
Drains									
2	Construction cement conc. Drain	-	-	-	-	400.00	M	5044.53	20.18
Road Furniture									
1	Add for road survey and preparation of DPR cost	-	-	-	-	3.20	KM	4500.00	0.14
2	Providing & fixing Informatory sign board of PMGSY Project	-	-	-	-	1.0	No.	15206.39	0.15
3	Providing & fixing Citizen Informatory board of PMGSY Project	-	-	-	-	1	No.	15206.39	0.15
4	Sign board Logo of PMGSY Project	-	-	-	-	2	No.	3500.00	0.07
5	Providing and fixing of Maintenance board as per drawing and detail of PMGSY	-	-	-	-	1	No.	15206.39	0.15
6	Providing and erecting direction and place identification retro-reflectorised sign as per IRC-67	-	-	-	-	15	No.	1809.21	0.27
Total:									208.33

Total Cost of the Project= 208.33 Lacs

MAINTENANCE COST @ 8% Average for five years

1st Year	10.00%	1.67	Lacs
2nd Year	15.00%	2.50	Lacs
3rd Year	20.00%	3.33	Lacs
4th Year	25.00%	4.17	Lacs
5th Year	30.00%	5.00	Lacs
Total		16.67	Lacs

Cost of Project Including Maintenance: 225.00 Lacs


Asstt. Ex. Engineer

Head Draftsman

Executive Engineer
MEGSY (P.R.R.D.A.) Division
BARAMULLA

CONSTRUCTION OF ROAD FROM KAKUTHAL TO BRANNAR

LENGTH OF ROAD: 3.2 KMS

PACKAGE NO.:

BLOCK : WAGOORA

DISTRICT : BARAMULLA

"ESTIMATED COST FOR CONSTRUCTION OF PAVEMENT

S.No.	Description of Item	No.	L (M)	B(M)	D/H (M)	Quantity	Unit	Rate (Rs)	Amount (Rs. In Lacs)
1	2	3	4	5	6	7	8	9	10
2	Loosening of ground up to level of 300mm below the sub grade level,watered ,graded and compacted ill layers to meet requirement of tables 300.1 and 300.2 for sub grade construction as per T.S Clause 302.5.2								
	Carriageway:	1	3200.00	4.90	0.30	4704.00	Cum		
	Passing Places:	12	30.00	1.75	0.30	189.00	Cum		
	Bus Stand at dead end:	3	15.00	15.00	0.30	202.50	Cum		
	Curves:	12	25.00	0.60	0.30	54.00	Cum		
	Zigs:	4	50.00	1.00	0.30	60.00	Cum		
						5209.50	Cum	61.32	319446.54
3	Construction of Granular Sub-Base/base/surface course with local materials (Table 400.13) by mix in place method normal construction of granular sub-base by providing local material spreading in uniform layers with motor grader on prepared surface,mixing by mix in place method with rotavator at once and compacting with smooth wheel roller to achieve the desired density complete as per clause 401.4 as per technical specification clause 408.								
	Carriageway:	1	3200.00	4.90	0.225	3528.00	Cum		
	Passing Places:	12	30.00	1.75	0.225	141.75	Cum		
	Bus Stand at dead end:	3	15.00	15.00	0.225	151.88	Cum		
	Curves:	12	25.00	0.60	0.225	40.50	Cum		
	Zigs:	4	50.00	1.00	0.225	45.00	Cum		
						3907.13	Cum	1031.55	4030394.79
	Haulage of material					3907.13	Cum	480.09	1875770.08
4	Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with three wheel 80-100 kN static roller in stages to proper grade and camber, applying and brooming, crushable screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 3 as per Technical Specification Clause 405.								
	Carriageway:	1	3200.00	3.00	0.075	720.00	Cum		
	Passing Places:	12	30.00	1.75	0.075	47.25	Cum		
	Bus Stand at dead end:	3	15.00	15.00	0.075	50.63	Cum		
	Curves:	12	25.00	0.60	0.075	13.50	Cum		
	Zigs:	4	50.00	1.00	0.075	15.00	Cum		
						846.38	Cum	1609.70	1362409.84
	Haulage of material					846.38	CUM	1090.19	922706.77

CONSTRUCTION OF ROAD FROM KAKUTHAL TO BRANNAR

LENGTH OF ROAD: 3.2 KMS

PACKAGE NO.:

BLOCK : WAGOORA

DISTRICT : BARAMULLA

"ESTIMATED COST FOR CONSTRUCTION OF PAVEMENT

S.No.	Description of Item	No.	L (M)	B(M)	D/H (M)	Quantity	Unit	Rate (Rs)	Amount (Rs. In Lacs)
1	2	3	4	5	6	7	8	9	10
5	Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per Technical Specification Clause 502								
	Carriageway:	1	3200.00	3.00		9600.00	Sqm		
	Passing Places:	12	30.00	1.75		52.50	Sqm		
	Bus Stand at dead end:	3	15.00	15.00		225.00	Sqm		
	Curves:	12	25.00	0.60		15.00	Sqm		
	Zigs:	4	50.00	1.00		50.00	Sqm		
						9942.50	Sqm	58.55	582133.38
	Haulage of material					9.94	Ton	412.46	4100.88
6	Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.20 to 0.25 kg per sqm on the prepared bituminous surface cleaned with Hydraulic broom as per Technical Specification Clause 502								
	Carriageway:	1	3200.00	3.00		9600.00	Sqm		
	Passing Places:	12	30.00	1.75		52.50	Sqm		
	Bus Stand at dead end:	3	15.00	15.00		225.00	Sqm		
	Curves:	12	25.00	0.60		15.00	Sqm		
	Zigs:	4	50.00	1.00		50.00	Sqm		
						9942.50	Sqm	16.51	164150.68
	Hualage of material					9.94	Ton	412.46	4100.88
7	Providing and laying bituminous macadam with hot mix plant using crushed aggregates of grading as per Table 500.4 premixed with bituminous binder, transported to site upto a lead of 1000 m laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled to achieve the desired compaction as per Technical Specification Clause 504.								
	Carriageway:	1	3200.00	3.00	0.05	480.00	Cum		
	Passing Places:	12	30.00	1.75	0.05	31.50	Cum		
	Bus Stand at dead end:	3	15.00	15.00	0.05	33.75	Cum		
	Curves:	12	25.00	0.60	0.05	9.00	Cum		
	Zigs:	4	50.00	1.00	0.05	10.00	Cum		
						564.25	Cum	7497.43	4230424.88
	Haulage of material					564.25	CUM	327.71	184910.37

CONSTRUCTION OF ROAD FROM KAKUTHAL TO BRANNAR

LENGTH OF ROAD: 3.2 KMS

PACKAGE NO.:

BLOCK : WAGOORA

DISTRICT : BARAMULLA

"ESTIMATED COST FOR CONSTRUCTION OF PAVEMENT

S.No.	Description of Item	No.	L (M)	B(M)	D/H (M)	Quantity	Unit	Rate (Rs)	Amount (Rs. In Lacs)
1	2	3	4	5	6	7	8	9	10
8	Providing, laying (by mechanical means) 25mm thick semi dense using bitumen S-90 to required line, grade and level including mixing in a suitable plant using bitumen content at the rate 5% . Using three wheel 80-100KN Static Roller for compaction excluding cost of bitumen finished work to be measured . Technical specification as per IRC.								
	Carriageway:	1	3200.00	3.00	0.00	9600.00	Sqm		
	Passing Places:	12	30.00	1.75	0.00	52.50	Sqm		
	Bus Stand at dead end:	3	15.00	15.00	0.00	225.00	Sqm		
	Curves:	12	25.00	0.60	0.00	15.00	Sqm		
	Zigs:	4	50.00	1.00	0.00	50.00	Sqm		
						9942.50	Sqm	255.95	2544782.88
	Haulage of material					9942.50	Sqm	8.19	81456.42
9	Providing premix seal coat with 8-10 tones power road roller type - B using bitumen @ 0.68Kg/sm and stone grit/ sand @ 0.006 cum/ Sqm, of the road conforming to the clause 513 of MOST specification.								
	Carriageway:	1	3200.00	3.00	0.00	9600.00	Sqm		
	Passing Places:	12	30.00	1.75	0.00	52.50	Sqm		
	Bus Stand at dead end:	3	15.00	15.00	0.00	225.00	Sqm		
	Curves:	12	25.00	0.60	0.00	15.00	Sqm		
	Zigs:	4	50.00	1.00	0.00	50.00	Sqm		
						9942.50	Sqm	76.81	763683.43
	Haulage of material					9942.50	Sqm	1.65	16393.39
10	Construction of hard shoulders with approved material obtained from Nallah/ Quarry with all lifts and leads , transporting to site spreading , grading to required slope and compacted to meet requirement of table 300.20. With lead upto 1000m as per technical specifications clause.303.1.Including cost and carriage of material from approved source to site of work, with loading, unloading and octorl. (Finished work to be measured, complete)	2	3200.00	0.5	(.2+.10)/2	480.00	CUM	1200.00	576000.00
	G. Total								17662865.19

Asstt. Ex. Engineer
Sub Div Ist Pattan

Head Draftsman

Ex-Engineer
PMGSY Div Baramulla
BARAMULLA

CONSTRUCTION OF ROAD FROM KAKUTHAL TO BRANNAR

LENGTH OF ROAD: 3.2 KMS

PACKAGE NO.:

BLOCK : WAGOORA

DISTRICT : BARAMULLA

"ESTIMATED COST FOR CONSTRUCTION OF PAVEMENT

S.No.	Description of Item	No.	L (M)	B(M)	D/H (M)	Quantity	Unit	Rate (Rs)	Amount (Rs. In Lacs)
1	2	3	4	5	6	7	8	9	10
8	Providing, laying (by mechanical means) 25mm thick semi dense using bitumen S-90 to required line, grade and level Including mixing in a suitable plant using bitumen content at the rate 5% . Using three wheel 80-100KN Static Roller for compaction excluding cost of bitumen finished work to be measured . Technical specification as per IRC.								
	Carriageway:	1	3200.00	3.00	0.00	9600.00	Sqm		
	Passing Places:	12	30.00	1.75	0.00	52.50	Sqm		
	Bus Stand at dead end:	3	15.00	15.00	0.00	225.00	Sqm		
	Curves:	12	25.00	0.60	0.00	15.00	Sqm		
	Zigs:	4	50.00	1.00	0.00	50.00	Sqm		
						9942.50	Sqm	255.95	2544782.88
	Haulage of material					9942.50	Sqm	8.19	81456.42
9	Providing premix seal coat with 8-10 tones power road roller type – B using bitumen @ 0.68Kg/sm and stone grit/ sand @ 0.006 cum/ Sqm, of the road conforming to the clause 513 of MOST specification.								
	Carriageway:	1	3200.00	3.00	0.00	9600.00	Sqm		
	Passing Places:	12	30.00	1.75	0.00	52.50	Sqm		
	Bus Stand at dead end:	3	15.00	15.00	0.00	225.00	Sqm		
	Curves:	12	25.00	0.60	0.00	15.00	Sqm		
	Zigs:	4	50.00	1.00	0.00	50.00	Sqm		
						9942.50	Sqm	76.81	763683.43
	Haulage of material					9942.50	Sqm	1.65	16393.39
10	Construction of hard shoulders with approved material obtained from Nallah/ Quarry with all lifts and leads , transporting to site , spreading , grading to required slope and compacted to meet requirement of table 300.20. With lead upto 1000m as per technical specifications clause.303.1.Including cost and carriage of material from approved source to site of work, with loading, unloading and octori. (Finished work to be measured, complete)	2	3200.00	0.5	(.2+.10)/2	480.00	CUM	1200.00	576000.00
	G. Total								17662865.19

Asstt. Ex Engineer
Sub Div Ist Pattan

Head Draftsman

Ex-Engineer
PMGSY Div Baramulla
BARAMULLA

CONSTRUCTION OF ROAD FROM KAKUTHAL TO BRANNAR
 LENGTH OF ROAD: 3.2 KMS
 BLOCK : WAGOORA

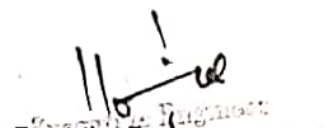
PACKAGE NO.:
 DISTRICT : BARAMULLA

"ESTIMATED COST FOR CONSTRUCTION OF PROTECTION CRATE BUND."

S.No	Description Of Item	No	Length	Breadth	Height	Quantity	Unit	Rate	Amount
1	Excavation in soil in hilly areas by mechanical means including cutting and trimming of side slopes and disposal of the excavated earth with a lift upto 1.5 m and lead upto 20 m as per technical specifications clause 1603.1								
	RD 1100 to RD 1200	1.00	100.00	1.20	0.60	72.00			
	TOTAL					72.00	Cum	239.32	Rs. 17,231.04
2	P/L boulder apron laid in wire crates with 4mm dia Black Annealed wire conforming to IS:280 and IS:4826 in 100mmx100mm mesh(woven diagonally)incl.10% extra for laps and joints laid with stone boulders weighing not less than 25Kgs each as per drawing and technical specifications clause 1301 incl carriage of all materials from source to site with all leads,lifts,loading,unloading and octroi(finished work to be measured.)								
	Ist tier	1.00	100.00	1.20	1.20	144.00			
	IInd Tier	1.00	100.00	1.20	1.20	144.00			
	TOTAL					288.00	Cum	1978.10	Rs. 569,692.80
	Haulage of material					288.00	Cum	562.90	Rs. 162,115.20
3	P/L boulder filling dry behind Crate walling, weighing not less than 25 Kgs each as per drawing and technical specifications clause 1301 incl carriage of all materials from source to site with all leads,lifts,loading,unloading and octroi(finished work to be measured.)	1.00	100.00	0.90	2.50	225.00	Cum	893.73	Rs. 201,089.25
	Haulage of material					225.00	Cum	480.09	Rs. 108,020.16
	Grand Total:								Rs. 1,058,148.45


 A.E.E.

PMGSY (JKRRDA) SUB DIVISION Ist (Pattan)


 Executive Engineer
 PMGSY(JKRRDA) Division Baramulla

CONSTRUCTION OF ROAD FROM KAKUTHAL TO BRANNAR

LENGTH OF ROAD: 3.2 KMS

BLOCK : WAGOORA


PACKAGE NO.:


DISTRICT : BARAMULLA

"ESTIMATED COST FOR CONSTRUCTION OF CEMENT CONCRETE DRAIN".

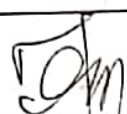
Length : 750 Mtr									
S.No	Description Of Items	No.	Length (M)	Breadth (M)	Depth/ Height (M)	Quantity	Unit	Rate	Amount
1	Earthwork in excavation for structures as per drawing and technical specifications Clause 305.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material. (Ref. MoRD Specification 300).	1	750.00	1.10	0.85	701.25	Cum	282.60	Rs. 198,173.25
2	P/L of stone soling (as directed) including watering, dressing, hand packing tightly, loading /unloading and all carriages /lifts involved upto site of work complete.	1	750.00	0.90	0.15	101.25	Cum	1312.28	Rs. 132,868.35
3	Providing concrete for plain/reinforced concrete (P.C.C grade M 10, Nominal mix 1:3:6, hand mix.) in open foundations, including formwork @ 4% of cost of labour component complete, as per drawings and technical specifications Clause 802, 803, 1202 & 1203. (Ref. MoRD Specification 800 & 1200.)	1	750.00	0.90	0.10	67.50	Cum	4743.3	Rs. 320,172.75
3/A	Haulage of materials from source to site including loading and unloading complete. (Haulage Chart enclosed)					67.50	Cum	633.40	Rs. 42,754.15
4	Providing concrete for plain/reinforced concrete in (P.C.C grade M 15, Nominal mix (1:2.5:5) in open foundations including formwork @ 4% of cost of labour component complete, as per drawings and technical specifications Clause 802, 803, 1202 & 1203. (Ref. MoRD Specification 800 & 1200.)	2	750.00	0.25	0.50	187.50	Cum	5339.99	Rs. 1,001,248.1
4/A	Haulage of materials from source to site including loading and unloading complete. (Haulage Chart enclosed)					187.50	Cum	632.50	Rs. 118,593.8
5	Providing and laying cement concrete flooring M-15 grade 40mm thick. (Ref. MoRD Specification 600.)	1	750.00		0.30	225.00	Sqm	321.98	Rs. 72,446.1
5/A	Haulage of materials from source to site including loading and unloading complete. (Haulage Chart enclosed)					33.75	Cum	632.50	Rs. 21,346.1


S.No	Description Of Items	No.	Length (M)	Breadth (M)	Depth/ Height (M)	Quantity	Unit	Rate	Amount
6	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and technical specifications clause 802, 803, 1202 and 1203 P.C.C grade M-25 nominal mix Including cost of form work and carriage of all materials from approved source to site of work with all leads, lifts, loading, unloading and octori.(Finished work to be measured)								
	RCC Slab: 5% of 10000 Mtrs= 500 RM	1	37.50	1.50	0.15	8.44	Cum		
	Total:					8.44	Cum	6,501.04	Rs. 54,852.53
6/A	Haulage of materials from source to site including loading and unloading complete. (Haulage Chart enclosed)					8.44	Cum	702.24	Rs. 5,925.17
7	Supplying, fitting and placing HYSD bar reinforcement in foundation complete as per drawings and technical specifications Clauses 1000 and 1202. (Ref. MoRD Specification 1000 & 1200.)	Qty Vide Item No.(4)				8.44 Cum @ 1%			
			0.08 Cum x 7.85T/Cum			0.66	MT	74173.50	Rs. 49,128.35
7/A	Haulage of materials from source to site including loading and unloading complete. (Haulage Chart enclosed)					0.66	MT	454.72	Rs. 301.18
	Total estimated cost:								Rs. 2,017,811.01


 Assistant Executive Engineer
 PMGSY Sub-Division 1st Pattan


 Executive Engineer
 PMGSY(JKRRDA)Division
 Baramulla.

S.No	Description Of Items	No.	Length (M)	Breadth (M)	Depth/ Height (M)	Quantity	Unit	Rate	Amount
6	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and technical specifications clause 802, 803, 1202 and 1203 P.C.C grade M-25 nominal mix Including cost of form work and carriage of all materials from approved source to site of work with all leads, lifts, loading, unloading and octori.(Finished work to be measured)								
	RCC Slab: 5% of 10000 Mtrs= 500 RM	1	37.50	1.50	0.15	8.44	Cum		
	Total:					8.44	Cum	6,501.04	Rs. 54,852.53
6/A	Haulage of materials from source to site including loading and unloading complete. (Haulage Chart enclosed)					8.44	Cum	702.24	Rs. 5,925.17
7	Supplying, fitting and placing HYSD bar reinforcement in foundation complete as per drawings and technical specifications Clauses 1000 and 1202. (Ref. MoRD Specification 1000 & 1200.)	Qty Vide Item No.(4)				8.44 Cum @ 1%			
			0.08 Cum x 7.85T/Cum			0.66	MT	74173.50	Rs. 49,128.35
7/A	Haulage of materials from source to site including loading and unloading complete. (Haulage Chart enclosed)					0.66	MT	454.72	Rs. 301.18
	Total estimated cost:								Rs. 2,017,811.01


 Assistant Executive Engineer
 PMGSY Sub-Division 1st Pattan


 Executive Engineer
 PMGSY(JKRRDA)Division
 Baramulla.

CONSTRUCTION OF ROAD FROM KAKUTHAL TO BRANNAR

LENGTH OF ROAD: 3.2 KMS

BLOCK : WAGOORA

PACKAGE NO.:

DISTRICT : BARAMULLA

"ESTIMATED COST FOR TRAFFIC SIGN /MARKING/ APPURTANCES"

S.No	Description Of Item	Unit	Quantity	Rate	Amount
1	Providing and fixing of typical PMGSY Informatory sign board with logo as per MORD specification and drawing Three MS plates of 1.6mm thick , top and middle plate duly welded with MS flat iron 25mmx5mm size on edges The lower plate will be welded with MS angle iron frame of 25x25x5 mm. The angle iron frame of the lower most plate and flat iron frame of middle plate will be welded o 2 No. 75x75mm of 12 SWG sheet tubes posts duly embeded in cement concrete M-15 grade blocks of 450x450x600 mm , 600mm below ground level. the topmost diamond plate will be welded to middle plate by 47x47 mm of SWG steel plate tube. All MS will be stove enameled on both sides. Lettering and printing arrows border etc will be painted with ready mixed synthetic enamel paint of superior quality in required shade and colour.All sections of framed posts and steel tube will be painted with primer and two coats of epoxy paint, as per drawing Clause 1701 and annexure 1700.1. (Fig No.2).	No	1	15206.39	Rs. 15,206.3
2	Providing and fixing of Citizen Informatory Board as per drawing and detail of PMGSY	No	1	15206.39	Rs. 15,206.3
3	Providing and fixing of PMGSY LOGO Board as per drawing and detail of PMGSY	No	2	3500.00	Rs. 7,000.0
4	Providing and fixing of Maintanance board as per drawing and detail of PMGSY	No	1	15206.39	Rs. 15,206.3
5	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 1701.2.3, fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on RCC Post 100 mm x 100 mm firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 x 450 x 600 mm, 600 mm below ground level as per approved drawing and Technical Specification Clause 1701	No	15.00	1809.21	Rs. 27,138.1
TOTAL:					Rs. 79,757.1

Assistant Executive Engineer
PMGSY Sub-Division 1st Pattan

Executive Engineer
PMGSY Sub-Division 1st Pattan
Baramulla.

CONSTRUCTION OF ROAD FROM KAKUTHAL TO BRANNAR

LENGTH OF ROAD: 3.2 KMS

PACKAGE NO.:

BLOCK : WAGOORA

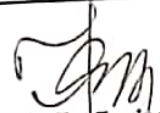
DISTRICT : BARAMULLA

CARRIAGE LOADING / UNLOADING CHART


S.No	Particulars	Source of Material	Quantity Required	Unit	Density	Weight of Material (In Ton)	Mileage (Km)	Haulage / Loading Unloading rate	Unit of Haulage	Amount
1	M-10 (1:3:6) for 1 Cum	-	-	-	-	-	-	-	-	-
a	Carriage of course agg.	Shrai	0.90	CUM	2.05	1.845	32	5.12	Ton/ Km	302.28
b	Carriage of fine agg.	Hanjiwera	0.45	CUM	1.84	0.828	39	5.12	Ton/ Km	165.34
c	Carriage of cement	Kunzer	0.22	Ton	-	0.220	25	5.12	Ton/ Km	28.16
d	Loading of coarse of agg. by mechanical means	-	0.90	CUM	-	-	-	50.67	CUM	45.60
e	Loading of fine agg. by manual means	-	0.45	CUM	-	-	-	47.66	CUM	21.45
g	Loading and unloading of cement by manual means	-	0.22	Ton	-	-	-	254.48	TON	55.99
h	Unloading of coarse agg. and fine agg.	-	1.35	CUM	-	-	-	10.80	CUM	14.58
-	-	-	-	-	-	-	-	-	Total	633.40
2	M-15 (1:2.5:5) for 1 Cum	-	-	-	-	-	-	-	-	-
a	Carriage of course agg.	Shrai	0.80	CUM	2.05	1.640	32	5.12	Ton/ Km	268.70
b	Carriage of fine agg.	Hanjiwera	0.48	CUM	1.84	0.880	39	5.12	Ton/ Km	175.72
c	Carriage of cement	Kunzer	0.28	Ton	-	0.275	25	5.12	Ton/ Km	35.20
d	Loading of coarse of agg. by mechanical means	-	0.90	CUM	-	-	-	50.67	CUM	45.60
e	Loading of fine agg. by manual means	-	0.45	CUM	-	-	-	47.66	CUM	21.45
g	Loading and unloading of cement by manual means	-	0.28	Ton	-	-	-	254.48	TON	71.25
h	Unloading of coarse agg. and fine agg.	-	1.35	CUM	-	-	-	10.80	CUM	14.58
-	-	-	-	-	-	-	-	-	Total	632.50
3	M-20 (1:2:4) for 1 Cum	-	-	-	-	-	-	-	-	-
a	Carriage of course agg.	Shrai	0.90	CUM	2.05	1.845	32	5.12	Ton/ Km	302.28
b	Carriage of fine agg.	Hanjiwera	0.45	CUM	1.84	0.828	39	5.12	Ton/ Km	165.34
c	Carriage of cement	Kunzer	0.32	Ton	-	0.320	25	5.12	Ton/ Km	40.96
d	Loading of coarse of agg. by mechanical means	-	0.90	CUM	-	-	-	50.67	CUM	45.60
e	Loading of fine agg. by manual means	-	0.45	CUM	-	-	-	47.66	CUM	21.45
g	Loading and unloading of cement by manual means	-	0.32	Ton	-	-	-	254.48	TON	81.43
h	Unloading of coarse agg. and fine agg.	-	1.35	CUM	-	-	-	10.80	CUM	14.58
-	-	-	-	-	-	-	-	-	Total	671.64
4	M-25 (1:1.5:3) for 1 Cum	-	-	-	-	-	-	-	-	-
a	Carriage of course agg.	Shrai	0.90	CUM	2.05	1.845	32	5.12	Ton/ Km	302.28
b	Carriage of fine agg.	Hanjiwera	0.45	CUM	1.84	0.828	39	5.12	Ton/ Km	165.34
c	Carriage of cement	Kunzer	0.40	Ton	-	0.400	25	5.12	Ton/ Km	51.20
d	Loading of coarse of agg. by mechanical means	-	0.90	CUM	-	-	-	50.67	CUM	45.60
e	Loading of fine agg. by manual means	-	0.45	CUM	-	-	-	47.66	CUM	21.45
g	Loading and unloading of cement by manual means	-	0.40	Ton	-	-	-	254.48	TON	101.79
h	Unloading of coarse agg. and fine agg.	-	1.35	CUM	-	-	-	10.80	CUM	14.58
-	-	-	-	-	-	-	-	-	Total	702.24
5	M-20 (50mm Thick Coping) for 1 RM	-	-	-	-	-	-	-	-	-
a	Carriage of course agg.	Shrai	0.027	CUM	2.05	0.055	32	5.12	Ton/ Km	9.01
b	Carriage of fine agg.	Hanjiwera	0.013	CUM	1.84	0.024	39	5.12	Ton/ Km	4.79
c	Carriage of cement	Kunzer	0.010	Ton	-	0.010	25	5.12	Ton/ Km	1.28

S.No	Particulars	Source of Material	Quantity Required	Unit	Density	Weight of Material (In Ton)	Mileage (Km)	Haulage / Loading Unloading rate	Unit of Haulage	Amount	
d	Loading of coarse of agg. by mechanical means	-	0.027	CUM	-	-	-	50.67	CUM	1.37	
e	Loading of fine agg. by manual means	-	0.013	CUM	-	-	-	47.66	CUM	0.62	
g	Loading and unloading of cement by manual means	-	0.010	Ton	-	-	-	254.48	TON	2.54	
h	Unloading of coarse agg. and fine agg.	-	0.040	CUM	-	-	-	10.80	CUM	0.43	
-	-	-	-	-	-	-	-	-	Total	20.05	
6	R R Masonry (1:6 Motor) 1 Cum	-	-	-	-	-	-	-	-	-	
a	Carriage of stone	Shrai	1.000	CUM	2.60	2.600	32	5.12	Ton/ Km	425.98	
b	Carriage of fine agg.	Hanjiwera	0.380	CUM	1.84	0.700	39	5.12	Ton/ Km	139.78	
c	Carriage of cement	Kunzer	0.092	Ton	-	0.092	25	5.12	Ton/ Km	11.78	
d	Loading of Stone (Manually)	-	1.000	CUM	-	-	-	50.67	CUM	50.67	
e	Loading of sand (Manually)	-	0.380	CUM	-	-	-	47.66	CUM	18.11	
g	Loading and unloading of cement by manual means	-	0.092	Ton	-	-	-	254.48	TON	23.41	
h	Unloading of coarse agg. and fine agg.	-	1.380	CUM	-	-	-	10.80	CUM	14.90	
-	-	-	-	-	-	-	-	-	Total	684.63	
-	-	-	-	-	-	-	-	-	-	-	
7	R. R. Dry Masonry for 1 Cum	-	-	-	-	-	-	-	-	-	
a	Carriage of stone	Beerwa	1.000	CUM	2.60	2.600	35	5.12	Ton/ Km	465.92	
b	Loading of Stone (Manually)	-	1.000	CUM	-	-	-	50.67	CUM	50.67	
c	Unloading of stones (Mechnically)	-	1.000	CUM	-	-	-	10.80	CUM	10.80	
-	-	-	-	-	-	-	-	-	Total	527.39	
8	Type-B (First Class)	-	-	-	-	-	-	-	-	-	
a	Carriage of granular Material	Shrai	1.000	CUM	1.92	1.920	32	5.12	Ton/ Km	314.57	
b	Loading by mechanical means	-	1.000	CUM	-	-	-	50.67	Ton/ Km	50.67	
c	Unloading of stones (Mechanically)	-	1.000	CUM	-	-	-	10.80	CUM	10.80	
-	-	-	-	-	-	-	-	-	Total	376.04	
9	750mm dia NP3 Pipes for 2.5m Pipe	-	-	-	-	-	-	-	-	-	
a	Carriage of NP3 Pipes	Zainkote	0.650	CUM	2.50	1.625	56	5.12	Ton/ Km	465.92	
b	Loading of pipes (Mechanically)	-	-	Per pipe	-	-	-	58.06	Per Pipe	58.06	
c	Unloading of pipes (Manually)	-	-	Per pipe	-	-	-	319.36	Per Pipe	319.36	
-	-	-	-	-	-	-	-	-	Total	843.34	
-	-	-	-	-	-	-	-	-	Hence rate per meter length		470.00
10	1000mm dia NP3 Pipes for 2.5m Pipe	-	-	-	-	-	-	-	-	-	
a	Carriage of NP3 Pipes	Zainkote	0.840	CUM	2.50	2.100	56	5.12	Ton/ Km	602.11	
b	Loading of pipes (Mechanically)	-	-	Per pipe	-	-	-	96.76	Per Pipe	96.76	
c	Unloading of pipes (Manually)	-	-	Per pipe	-	-	-	383.23	Per Pipe	383.23	
-	-	-	-	-	-	-	-	-	Total	1082.10	
-	-	-	-	-	-	-	-	-	Hence rate per meter length		432.84
10/a	Crate wire	-	-	-	-	-	-	-	-	-	
a	Carriage	Zainkote	1	Ton	-	-	56	5.12	TKM	286.72	
b	Loading/unloading	-	1	Ton	-	-	-	276.18	Ton	276.18	
c	-	-	-	-	-	-	-	-	Total	562.90	
11	Steel (TMT)	Baramulla	1.000	Ton	1.00	1.000	35	5.12	Ton/ Km	179.20	
-	Loading Unloading	-	1.000	Ton	-	1.000	-	275.52	Ton	275.52	
-	-	-	-	-	-	-	-	-	Total	454.72	
12	GSB for 1 Cum	Shrai	1.280	CUM	1.92	2.450	32	5.12	Ton/ Km	401.41	
a	Loading by mechanical means	-	1.280	CUM	-	-	-	50.67	CUM	64.86	
b	Unloading by mechanical means	-	1.280	CUM	-	-	-	10.80	CUM	13.82	
-	-	-	-	-	-	-	-	-	Total	480.09	
13	Macadam for 1.00 Cum	-	-	-	-	-	-	-	-	-	
a	Carriage of Macadam	Kunzer	1.00	CUM	-	2.08	25	5.12	Ton / Km	266.24	

S.No	Particulars	Source of Material	Quantity Required	Unit	Density	Weight of Material (In Ton)	Mileage (Km)	Haulage / Loading Unloading rate	Unit of Haulage	Amount
b	Loading of Macadam by mechanical means	-	1.00	CUM	-	-	-	50.67	CUM	50.67
c	Unloading of Macadm	-	1.00	CUM	-	-	-	10.80	CUM	10.80
-	-	-	-	-	-	-	-	-	Total	327.71
14	WBM G-II for 1.00 Cum	-	-	-	-	-	-	-	-	-
a	Carriage of WBM 63mm - 45mm	Wayen	1.21	CUM	2.05	2.480	80	5.12	Ton/ Km	1015.81
b	Loading of agg. by mechanical means	-	1.21	CUM	-	-	-	50.67	CUM	61.31
c	Unloading of agg.	-	1.21	CUM	-	-	-	10.80	CUM	13.07
-	-	-	-	-	-	-	-	-	Total	1090.19
16	WBM G-III for 1.00 Cum	-	-	-	-	-	-	-	-	-
a	Carriage of WBM 24.40mm - 53.00mm	wayen	1.21	CUM	2.05	2.480	80	5.12	Ton/ Km	1015.81
b	Loading of agg. by mechanical means	-	1.21	CUM	-	-	-	50.67	CUM	61.31
c	Unloading of agg.	-	1.21	CUM	-	-	-	10.80	CUM	13.07
-	-	-	-	-	-	-	-	-	Total	1090.19
17	OGPC 25mm thick for 1.00 SQM	-	-	-	-	-	-	-	-	-
a	Carriage of OGPC	Kunzer	0.025	CUM	2.08	0.052	25	5.12	Ton/ Km	6.66
b	Loading of OGPC by machnical means	-	0.025	CUM	-	-	-	50.67	CUM	1.27
c	Unloading of OGPC	-	0.025	CUM	-	-	-	10.80	CUM	0.27
-	-	-	-	-	-	-	-	-	Total	8.19
18	Seal coat for 1.00 SQM	-	-	-	-	-	-	-	-	-
a	Carriage of seal coat	Kunzer	0.006	CUM	2.08	0.010	25	5.12	Ton/ Km	1.28
b	Loading of seal coat	-	0.006	CUM	-	-	-	50.67	CUM	0.30
c	Unloading of Seal coat	-	0.006	CUM	-	-	-	10.80	CUM	0.06
-	-	-	-	-	-	-	-	-	Total	1.65
19	Tar / Bitumenous for Primer / Tack coat per SQM	-	-	-	-	-	-	-	-	-
a	Carriage of Tar	kunzer	1.000	Ton	-	-	25	5.12	Ton/ Km	128.00
b	Loading of Tar / Bitumenous	-	1.000	Ton	-	-	-	149.18	Ton	149.18
c	Unloading of Tar / Bitumenous (Mechnically)	-	1.000	Ton	-	-	-	135.28	Ton	135.28
-	-	-	-	-	-	-	-	-	Total	412.46
-	-	-	-	-	Tar required per SQM 0.30 KG				-	-


Asstt. Ex. Engineer

Head Draftsman


Executive Engineer
Ex. Engineer
PMGSY (P.R.R.D.A.) Div.
PMGSY Div. Baramulla
BARAMULLA

Stage II of road form Kakawthal to Brannar

Start	Kakawthal
End	Brannar
Type	Stage II
CBR	2% to 2.5%
District	Baramulla
Habitation	Brannar
Road Code	L039
Population	1332
Length of Road	3.2
Block	Wagoora
Const Cost	208.33 Lacs
Maint. Cost	16.67 Lacs
Total Cost	225.00 Lacs

01. HANUWALTR: GRAM SADAK YOJANA

01

Stage II of Kakawthal to Brannar road

Length of Road = 3.2 Km

Const Cost = 208.33 Lacs

Maint. Cost = 16.67 Lacs