



Government of Nepal



District Transport Master Plan (DTMP)



Ministry of Federal Affairs
and Local Development

Department of Local Infrastructure
Development and Agricultural
Roads (DOLIDAR)

District Development Committee,
Parbat



Falgun, 2069 (February, 2013)

Prepared by the District Technical Office (DTO) for Parbat with Technical Assistance from the Department of Local Infrastructure and Agricultural Roads (DOLIDAR), Ministry of Federal Affairs and Local Development and grant supported by DFID

FOREWORD

It is my great pleasure to introduce this District Transport Master Plan (DTMP) of Parbat district especially for district road core network (DRCN). I believe that this document will be helpful in backstopping to Rural Transport Infrastructure Sector Wide Approach (RTI SWAp) through sustainable planning, resources mobilization, implementation and monitoring of the rural road sub-sector development. The document is anticipated to generate substantial employment opportunities for rural people through increased and reliable accessibility in on-farm and off-farm livelihood diversification, and commercialization and industrialization of agriculture and other economic sectors, as well as harmonization of social centers. In this context, rural road sector will play a fundamental role to strengthen and promote overall economic growth of this district through established and improved year round transport services reinforcing intra and inter-district linkages .

Therefore, it is most crucial in executing rural road networks in a planned way as per the District Transport Master Plan (DTMP) by considering the framework of available resources in DDC comprising both internal and external sources. Viewing these aspects, DDC Parbat has prepared the DTMP by focusing most of the available resources into upgrading and maintenance of the existing road networks. This document is also been assumed to be helpful in lobbying and fascinating the donor agencies through central government towards generating needy resources through basket fund approach. Furthermore, this document not solely will be supportive in avoiding pervasive duplication approach in resources allocation under the rural road network development sector but also will be helpful in underpinning overall development management of the district.

I would, firstly like to express my gratitude to Mr. Bakhat Bahadur Shahi, RTI Pilot District Asset Management Engineer for his continuous dedication, hard work, cooperation, negotiation and counselling in bringing up this DTMP document at this final stage successfully. I would also express my gratitude to Mr. Navaraj Adhikari, RTI Pilot Sub Asset Management Engineer for his valuable support in the process of preparing DTMP report.

I would like to thank to Mr. Om Bahadur K.C., Chief of District Technical Office (DTO), Mr. Uday Bahadur Parajuli, Planning and Administrative Officer (DDC), Mr. Tulsi Ram Sharma, Program Officer (DDC), and other DDC and DTO staffs who directly and indirectly supported in the process of preparing this document.

My special thank goes to all chief and representatives of political parties and other DTICC members, as well as civil societies who played central role in the prioritization of roads for DRCN and other valuable supports in preparing this document.

Last but not least, I would like to express my heartfelt gratitude to Ministry of Federal Affairs and Local Development (MoFALD), Department of Local Infrastructure Development and Agricultural Roads (DOLIDAR) and RTI SECTOR Maintenance Pilot Central Unit for their valuable support to produce this report.

Any innovative and constructive suggestions regarding policy implementation and compliance of DTMP will be highly appreciated.

Krishna Prasad Lamsal
Local Development Officer
District Development Committee
Parbat, Nepal

ACKNOWLEDGEMENTS

District Transport Master Plan (DTMP) of Parbat District has been prepared with support from UK AID/DFID, Technical Assistance by RTI Sector Maintenance Pilot and close coordination with DoLIDAR.

We would like to express our gratitude to Mr Krishna Prasad Lamsal, Local Development Officer (LDO), Om Bahadur K.C., Chief District Technical Office (DTO), Mr. Uday Bahadur Parajuli, Planning and Administrative Officer, Mr. Tulsi Ram Shara (DDC) and all other DDC and DTO staffs for their valuable suggestions and co-operation for the preparation of this report.

We would also like to thank Mr Bupendra Bahadur Basnet, Director General of DOLIDAR, members of the DOLIDAR Technical Committee, including Mr. Ganga Bahadur Basnet, Coordinator, Mr Jeevan Guragain, Mr Krishna Bahadur Katwal, Mr Kumar Thapa and Mr. Manoj Krishna Shrestha, RTI Planning and Infrastructure Specialist, as well as Serge Cartier Van Dissel, RTI Rural Roads Engineering Specialist and Mr. Michael Green, RTI Team Leader all of whom were instrumental in shaping the new, “slim” version of the DTMP.

The DTMP for Parbat was prepared by Mr. Bakhat Bahadur Shahi, RTI Pilot District Asset Management Engineer with the supporting role of Mr. Navaraj Adhikari, RTI Pilot Sub Asset Management Engineer. The author is grateful to all the local people and leaders who have rendered their valuable assistance to the team during the preparation of the DTMP.

EXECUTIVE SUMMARY

Parbat District is located in Dhulagiri Zone of the Western Development Region of Nepal. Its position is flanked by the districts of Kaski and Syanja in East; Baglung and Myagdi in West; Myagdi in North; and Syanja and Gulmi in South. There are 55 VDCs with 11 Illokas and 2 constituencies. The area is stretched over mid hill and terrain ranges from 520 mt to 3300 mt above average mean seal level covering 494 sq. km. It has annual average rainfall of 2500 mm and temperature in between 32.3 and 7.5 degrees Celsius. The district falls in the subtropical to cold temperate climatic zone. The district consists of numerous ridges and rivers. The Modi River is highly potential in hydropower generation and promotion. Setibeni and Modibeni are the famous sacred religious centres and Panchase is one of the most famous mountain viewing points. Major occupation in the district was agrarian and people have slowly been shifting from agriculture to other occupations. About 51 % of people have been adopting subsistence agriculture and rest 49% of people have been adopting in other occupations.

The district inventory identified just over 600 km of roads, including 64 km of strategic roads, 25 km of urban roads, 292 km of district road core network (DRCN) and 250 km of village road network. In coordination with the DTICC and DDC, 32 rural roads with a length of 292 km were identified as making up the district road core network (DRCN), and the remaining 250 km were classified as village roads. The existing DRCN roads link up all 55 VDC headquarters. Of the core district road network, 17% has a gravel surface and 83% has an earthen surface, resulting in 17% being considered all-weather and only 83% fair weather.

Road Class	Total length	Black Top	Gravel	Earthen
Strategic road network	63.34	40.72	-	22.62
Urban roads	24.47	3.46	2.35	18.66
District road core network	291.32	0.35	50.31	240.66
Village roads	249.48	0.65	-	248.83
Total	628.60	45.18	52.66	530.77

Annual conservation costs are estimated at NPR 108 million based on the first year, and will be updated in the ARMP based on actual annual maintenance needs as determined in the annual road condition survey. For the full five-year period the conservation costs will come to NPR 538 million. An analysis of the road network identified the need for improvement of all the DRCN roads in order to bring them to a maintainable all-weather standard and provide them with a proper road surface in light of existing traffic volumes. The required improvements and their estimated costs are listed below.

Improvement type	Requirement	Cost (NPR)
Bridges	210 m	126,000,000
Slab culverts	50 m	7,500,000
Causeways	635 m	27,950,000
Hume pipes	92 units	920,000
Masonry retaining walls	415 m ³	4,150,000
Gabion retaining walls	12170 m ³	30,425,000
Lined drains	140600 m	140,600,000
Widening	49300 m	246,500,000
Rehabilitation	11.71 km	9,368,000
Gravelling	240.662 km	529,456,400
Blacktopping	- km	-
New construction	0.06 km	372,000
Total		1,123,241,400

The available budget for the road sector for the coming five years (fiscal year 2069/70 to 2073/74) is estimated to be NPR 1320 million. Allocation to the district road core network was set at 80% of the total road sector budget, which was subsequently allocated firstly to the annual maintenance needs and then to the improvement needs. This budget is insufficient to cover all the estimated costs of conservation, improvement and new construction. However, it allows all conservation requirements to be covered throughout the DTMP period and some of the improvement works to be completed before the end of the DTMP period. The remaining improvement works will be carried out in the next DTMP. New construction work of only one 60m section is expected to be implemented by DOR fund which has been regularly funded every year.

Within the DTMP period 142 km of roads will be gravelled (49%), resulting in a total of 193 km being brought to a maintainable all-weather standard. VDC headquarters with access to all-weather DRCN roads or the SRN will increase from 25 to 41, while the percentage of the district population with such access will increase from 59% to 80%.

ABBREVIATIONS

ARMP	Annual Road Maintenance Plan
DDC	District Development Committee
DFID	Department for International Development
DOLIDAR	Department of Local Infrastructure Development and Agricultural Roads
DOR	Department of Roads
DRCN	District Road Core Network
DTICC	District Transport Infrastructure Coordination Committee
DTMP	District Transport Master Plan
DTO	District Technical Office
DTPP	District Transport Perspective Plan
GIS	Geographical Information system
GON	Government of Nepal
GPS	Global Positioning System
HQ	Headquarter
KM	Kilometre
LGCDP	Local Governance and Community Development Programme
MoFALD	Ministry of Federal Affairs and Local Development
NPR	Nepali Rupee
RAP	Rural Access Programme
RRRSDP	Rural Reconstruction and Rehabilitation Sector Development Program
RTI	Rural Transport Infrastructure
SRN	Strategic Road Network
SWAp	Sector Wide Approach
VDC	Village Development Committee
UK	United Kingdom

CONTENTS

FOREWORD.....	i
Acknowledgements	ii
Executive summary	iii
Abbreviations	v
1. Introduction.....	8
2. District road core network (DRCN).....	8
2.1 Total road network.....	9
2.2 National highways and feeder roads.....	9
2.3 District Road Core Network	9
2.4 Village roads.....	10
3. District transport perspective plan (DTPP).....	14
3.1 Conservation	14
3.2 Improvement.....	15
3.3 New construction	19
3.4 District transport perspective plan.....	20
4. Cost Estimation	23
4.1 Conservation	23
4.2 Improvement.....	25
4.3 New construction	27
4.4 DTTP costs	27
5. Ranking	28
5.1 Conservation	28
5.2 Improvement.....	29
5.3 New construction	30
6. District transport master plan (DTMP).....	30
6.1 Five year projected financial resources.....	30
6.2 Budget allocation	31
6.3 DTMP outputs.....	35
6.4 DTMP outcome.....	35
Annex 1 Traffic Data.....	37
Annex 2 Population Served	38
Annex 3 Overall Road Inventory.....	40
Annex 4 DDC Board Approval Decision.....	42
Annex 5 DTICC Meeting Approval Decision.....	47

TABLES

Table 2.1.1	Road Length in Parbat District (km)	9
Table 2.2.1	National Highways and Feeder Roads in Parbat District (km)	9
Table 2.3.1	Road Length in Parbat District (km)	9
Table 2.3.2	District Road Core Network in Parbat District (km)	10
Table 3.1.1	Conservation Requirements.....	14
Table 3.2.1	Sections of the District Road Core Network Requiring Rehabilitation.....	16
Table 3.2.2	Sections of the District Road Core Network Requiring Gravelling	16
Table 3.2.3	Required Cross Drainage Structures.....	17
Table 3.2.4	Required Protective Structures	18
Table 3.2.5	Sections of the District Road Core Network Requiring Widening.....	18
Table 3.2.6	Sections of the District Road Rore Network Requiring Blacktopping	19
Table 3.3.1	Sections of the District Road Core Network Requiring New Construction	19
Table 3.4.1	District Transport Perspective Plan	21
Table 4.1.1	Standard Unit Costs for Conservation.....	23
Table 4.1.2	Estimated Conservation Costs for the First Year (NPR '000)	24
Table 4.2.1	Standard Unit Costs for Improvement Activities	25
Table 4.2.2	Cost Estimate for Improvement Measures (NPR '000).....	26
Table 4.3.1	Standard Unit Costs for New Construction	27
Table 4.3.2	Cost Estimate for New Construction (NPR '000)	27
Table 4.4.1	DTPP CostS (NPR '000)	27
Table 5.1.1	Ranking of Conservation Works (NPR '000)	28
Table 5.2.1	Ranking of Improvement Works (NPR '000).....	29
Table 5.3.1	Ranking of Construction Works (NPR '000)	30
Table 6.1.1	Estimated Funding Levels (Roads) for Next Five Years (in NPR '000).....	30
Table 6.2.1	Investment Plan	32
Table 6.3.1	DTMP Output.....	35
Table 6.4.1	Standard of DRCN Roads	35
Table 6.4.2	Population with Access to Road Network.....	35

FIGURES

Figure 1	Map of Nepal indicating Parbat district.....	8
Figure 2	District Road Core Network Map of Parbat	12
Figure 3	District Road Core Network Map of Parbat	13
Figure 4	District Transport Perspective Plan (DTPP) Map of Parbat.....	22
Figure 5	District road sector budget allocation	31
Figure 6	District Transport Master Plan (DTMP) of Parbat.....	36

1. Introduction

Parbat District is located in Dhulagiri Zone of the Western Development Region of Nepal. Its position is flanked by the districts of Kaski and Syanja in East; Baglung and Myagdi in West; Myagdi in North; and Syanja and Gulmi in South. There are 55 VDCs with 11 Illokas and 2 constituencies. The area is stretched over mid hill and terrain ranges from 520 mt to 3300 mt above average mean seal level covering 494 sq. km. It has annual average rainfall of 2500 mm and temperature in between 32.3 and 7.5 degrees Celsius. The district falls in the subtropical to cold temperate climatic zone. The district consists of numerous ridges and rivers. Setibeni and Modibeni are the famous sacred religious centres and Panchase in one of the most famous mountain viewing points. Major occupation in the district was agrarian and people have slowly been shifting from agriculture to other occupations. About 51 % of people have been adopting subsistence agriculture and rest 49% of people have been adopting in other occupations.

Figure 1: Map of Nepal indicating Parbat District



According to the national population census (2068 B.S.), the total population of the district is 146,590 comprising of 81,289 female (55%) and 65301 male (45%) residing in 35,719 households. Parbat district has an average population density of around 297 people per square km. The average family size is 4.1. Life expectancy of the people is 58 years. The average literacy rate is about 68.15% (61.99% female and 75.82% male). The district has multi ethnic compositions; majorities are Brahman, Chhetri, Thakuri and Sanyashi (Giri and Puri). Majority of people pursue Hindu religion as 89.48% followed by Buddhist as 9.32%, then Islam 0.43%. Common communicating language is Nepali (87.89%) followed by Magar (5.56%) and Gurung (4.51%).

Although accessibility in transport to Parbat is limited, this is improving rapidly. The district has access to the Baglung Highway (Pokhara-Baglung) with bituminous standard and maintained by DOR. A 14.32 km feeder road from Maldhunga to Myagdi has been recently upgraded with bituminous surface by DOR. The district is connected with Syangja district by Setibeni-Armadi road (Lokmarg) which is already in operation upto Phalebas bazaar with earthen surface. The remaining section from Phalebas to Armadi, which meets Baglung highway, is under construction.

2. District road core network (DRCN)

This chapter gives an overview of the existing roads in Parbat district, distinguishing between strategic roads and rural roads. It goes on to identify those rural roads that make up the district road core network (DRCN) that will form the basis for this DTMP. The remaining rural roads are classified as village roads.

2.1 Total road network

Parbat district has an estimated road network of 629 kilometres, including 64 km of strategic roads managed by DOR, 25 km of urban roads managed by Siwalaya VDC and 541km of rural roads managed by Parbat DDC. About one third of the strategic roads and all of the rural roads have an earthen surface. A map of the total road network in Parbat district is shown in figure 2.

Table 2.1.1 Road Length in Parbat District (km)

Road Class	Total length	Black Top	Gravel	Earthen
Strategic roads	63.34	40.72	-	22.62
Urban roads	24.47	3.46	2.35	18.66
Rural roads	540.80	1.00	50.31	489.49
Total	628.60	45.18	52.66	530.77

2.2 National highways and feeder roads

Parbat district has 1 highway (Baglung highway) and two feeder roads totalling 64 km. The Baglung highway and Maldhunga-Myagdi feeder road has already been blacktopped by DOR, while the Setibeni-Armadi feeder road is partly constructed upto Phalebas as an earthen surface and remaining section is under construction.

Table 2.2.1 National Highways and Feeder Roads in Parbat District (km)

Code	Description	Total length	Black Top	Gravel	Earthen
F042	Dhaulagirigate-Maldhunga	26.4	26.4	-	-
F133	Maldhunga-Beni	14.32	14.32	-	-
F131	Setibeni-Armadi	22.62	-	-	22.62
Total		63.34	40.72	-	22.62

2.3 District Road Core Network

As part of the preparation of this DTMP, the District Road Core Network (DRCN) was identified together with the DTICC and DDC. This DRCN is the minimum network that allows all VDC headquarters to be connected with the strategic road network and the district headquarters, either directly or through other VDCs. In selecting the DRCN roads, account was taken of road conditions and existing traffic levels. The identified DRCN roads were subsequently provided with road codes conforming to national standards.

The resulting District Road Core Network is shown in figure 3 at the end of this chapter. The DRCN consists of 32 district roads with a total length of 292 km. The remaining 250 km of existing rural roads are not considered to be DRCN roads and are classified as village roads under the responsibility of the VDCs. Of the total length of DRCN roads, about 51 km roads is just gravelled under RRRSDP project along with a little blacktop section managed by Modi hydro-electric project as all-weather and remaining length is currently earthen in surface and are considered fair-weather only (Table 2.3.1). A complete list of roads inventory and DRCN roads along with their characteristics is provided in **Annex 3** and Table 2.3.2 respectively.

Table 2.3.1 Road Length in Parbat District (km)

Road Class	Total length	Black Top	Gravel	Earthen
Strategic road network	63.34	40.72	-	22.62
Highways	26.40	26.40	-	-
Feeder roads	36.94	14.32	-	22.62
Urban roads	24.47	3.46	2.35	18.66
Sivalaya	24.47	3.46	2.35	18.66
District road core network	291.32	0.35	50.31	240.66
Village roads	249.48	0.65	-	248.83
Total	628.60	45.18	52.66	530.77

Table 2.3.2 District Road Core Network in Parbat District (km)

ode	Name of Road	Total length	Black Top	Gravel	Earthen	All weather	Fair weather	Name Settlements on Road
44DR001	Wariben-Manjhphant-Lekphant (Annechaur)	11.8750			11.88	-	11.88	Waribenibazar, Mallaj (Kotghar), Annechaur (Lekphant VDC Office)
44DR002	Mallaj (Kotghar)-Banskarka (Upallo) VDC Office	4.20			4.20	-	4.20	Mallaj (Kotghar), Banskarka (Upallo), Homestay, VDC Office
44DR003	Millanchowk-Ratamata/Bhotedanda-Salija VDC Office	14.29			14.29	-	14.29	Millanchowkbazar, Kholakhet, Ratamata, Bhotedanda, Salija (VDC Office)
44DR004	Millanchowk-Salyan-Ghakhet	5.98			5.98	-	5.98	Millanchowk, Salyan, Ghakhet (VDC Office)
44DR005	Khaniyaghant-Nanglibang (VDC Office)	2.67			2.67	-	2.67	Khaniyaghant, Naglibang (VDC Office)
44DR006	Armadi-Bhatebari-Banaubazaar	12.58			12.58	-	12.58	Armadi, Bagaicha, Bhatebari, Tatarkot, Banaubazar
44DR007	Bagaicha-Badahare (VDC Office)	2.69			2.69	-	2.69	Bagaicha, Badahare (VDC Office)
44DR008	Kushma-Halhale School	11.52	7.50	4.02	7.50	4.02	4.02	Kushmabazar, Salyan, Halhale School
44DR009	Padamkholsi-Sarunchaur (VDC Office)	1.44			1.44	-	1.44	Padamkholsi, Saranchaur (VDC Office)
44DR010	Patichaur-Bajung-Kyang (VDC Office)	14.46			14.46	-	14.46	Patichaubazar, Bause, Bajung, Khajuri, Kyang (VDC Office)
44DR011	Patichaur-Maidan-Labsibot (VDC Office)	12.38			12.38	-	12.38	Patichaubazar, Kaideni, Labsibot (VDC Office)
44DR012	Maidan (Deupur)-Purnagoan (VDC Office)	3.49			3.49	-	3.49	Maidan (Deupur), Purnagoan (VDC Office)
44DR013	Dimuwa-Darak-Chitre (VDC Office)	7.79	0.35		7.44	0.35	7.44	Dimuwabazar, Tilahar, Darak, Chitre (VDC Office)
44DR014	Dovilla-Cyclechowk-Phalebas Dhika	16.00		16.00	-	16.00	-	Dovillabazar, Silmi, Cyclechowkbazar, Mudikuwa, Phalebas Dhika
44DR015	Dovilla Bridge-Pakuwa-Gangate-Arthar	12.48			12.48	-	12.48	Dovilla (Silmi), Pakuwa, Gangate, Karbare, Dandakharka, Arthar (VDC Office)
44DR016	Pakuwa-Chhapa-Ramjathanti	6.67			6.67	-	6.67	Pakuwa, Chalise goan, Chhapa, Ramjathantibazar
44DR017	Silmi-Thulipokhari-Karkineta	13.43			13.43	-	13.43	Silmi, Lamatha, Thulipokhari, Kaula, Karkinetabazar
44DR018	Thausekhola-Bitlab-Pipaltari (VDC Office)	2.27			2.27	-	2.27	Thausekhola (Highway), Bitlab, Piplatari (VDC Office)
44DR019	Cyclechowk-Chuchundearali-Thapathan-Bhangara (VDC Office)	17.27			17.27	-	17.27	Cyclechowkbazar,Shankarpokhari, Melpokhari, Thapathanabazar, Ulleri, Bhangara (VDC Office)
44DR020	Mudikuwa-Jhaklak-Kurgha-Lunkhu	19.11			19.11	-	19.11	Mudikuwabazar, Jhaklak, Pipaldanda, Chirdikhola, Kurgha, Lunkhubazar
44DR021	Lamayakhola-Limithana-Thanamaula VDC Office	5.03			5.03	-	5.03	Lamayakhola, Limithana, Thanamaula (VDC Office)
44DR022	Hilekhola-Karkineta-Lunkhu	22.72		10.77	11.95	10.77	11.95	Hilekhola (Syanja & Parbat Border), Karkinetabazar, Bagalebazar, Ghatebazar, Pakhapani, Lunkhubazar
44DR023	Phalamkhani (Dandakateri)-Ghante	2.23			2.23	-	2.23	Dadakateri (Phalamkhani VDC Office), Ghante
44DR024	Lunkhu-Jyamire-Huwas	14.76			14.76	-	14.76	Lunkhubazar, Purnagoan, Simle (VDC Office), Bhorlebazar, Huwasbazar(Hatemalachowk)
44DR025	Lunkhu-Payubhanjyang-Hosrangdi VDC Office	14.80			14.80	-	14.80	Lunkhubazar, Lunkhugoan, Bhoksing, Payubhanjyang, Horsangdi (VDC Office)

Code	Name of Road	Total length	Black Top	Gravel	Earthen	All weather	Fair weather	Name Settlements on Road
44DR026	Lunkhu-Balakot (Daha)	4.06			4.06	-	4.06	Lunkhubazar, Daha (Balakot VDC Office)
44DR027	Sirkang (Lokmarg)-Pangrang VDC Office	3.04			3.04	-	3.04	Sirkang (Lokmarg), Pangrang (VDC Office)
44DR028	Chisapani-Huwa-Wahakibhanjyang-Barrachaur (Lokmarg)	23.07		16.04	7.03	16.04	7.03	Chisapani (Syangja & Parbat Border), Huwasbazar, Dud, Wahakibhanjyang, Ranipani, Barrachaur Khahare (Lokmarg)
44DR029	Urampokhara-Wahakibhajyang	2.73			2.73	-	2.73	Urampokhara (VDC Office), Wahakibhanyang bazar
44DR030	Wahakibhajyang-Salgram VDC Office	1.09			1.09	-	1.09	Waribenibazar, Deurali (Saligram VDC Office)
44DR031	Duda-Maidan (Beulibas)	2.35			2.35	-	2.35	Dudabazar, Maidan (Beulibas), VDC Office
44DR032	Arnas (Arthung)-Taklak VDC Office	2.82			2.82	-	2.82	Arnas (Arthung), Taklak (VDC Office)
Total		291.32	0.35	50.31	240.66	50.66	240.66	

2.4 Village ROADS

The remaining roads length of 250 km that do not form part of the identified district road core network (DRCN) are classified as village roads and are under the responsibility of the 55 VDCs in Parbat district. These are roads of a lower importance that do not form the main link between the VDC headquarters and the district headquarters or strategic road network. Instead they provide additional access to other parts of the VDCs.

On average each VDC will thus be responsible for 4.5 km of village roads. It is recommended that the VDCs organise maintenance workers to carry out the emergency and routine/recurrent maintenance of these roads to ensure they remain accessible. Any upgrading or new construction of village roads falls outside the scope of this DTMP and is the responsibility of the VDCs.

Funding for these roads will mainly come from the VDC grants. Some district funding will also be allocated to the village roads (see also chapter 6). However, this district funding will be mainly for maintenance, especially emergency maintenance and routine/recurrent maintenance to keep the village roads open.

Figure 2 District Inventory Map of Parbat

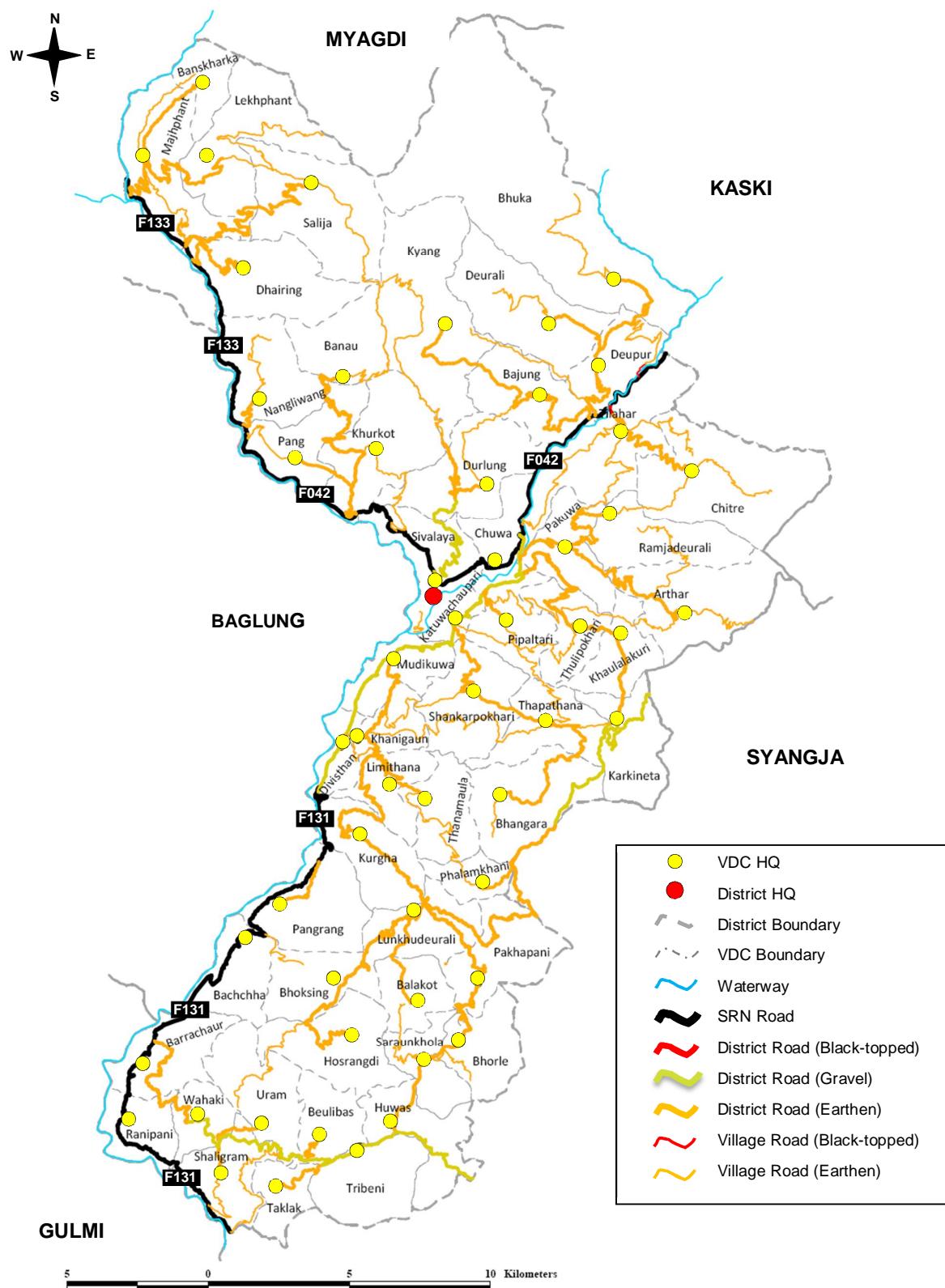
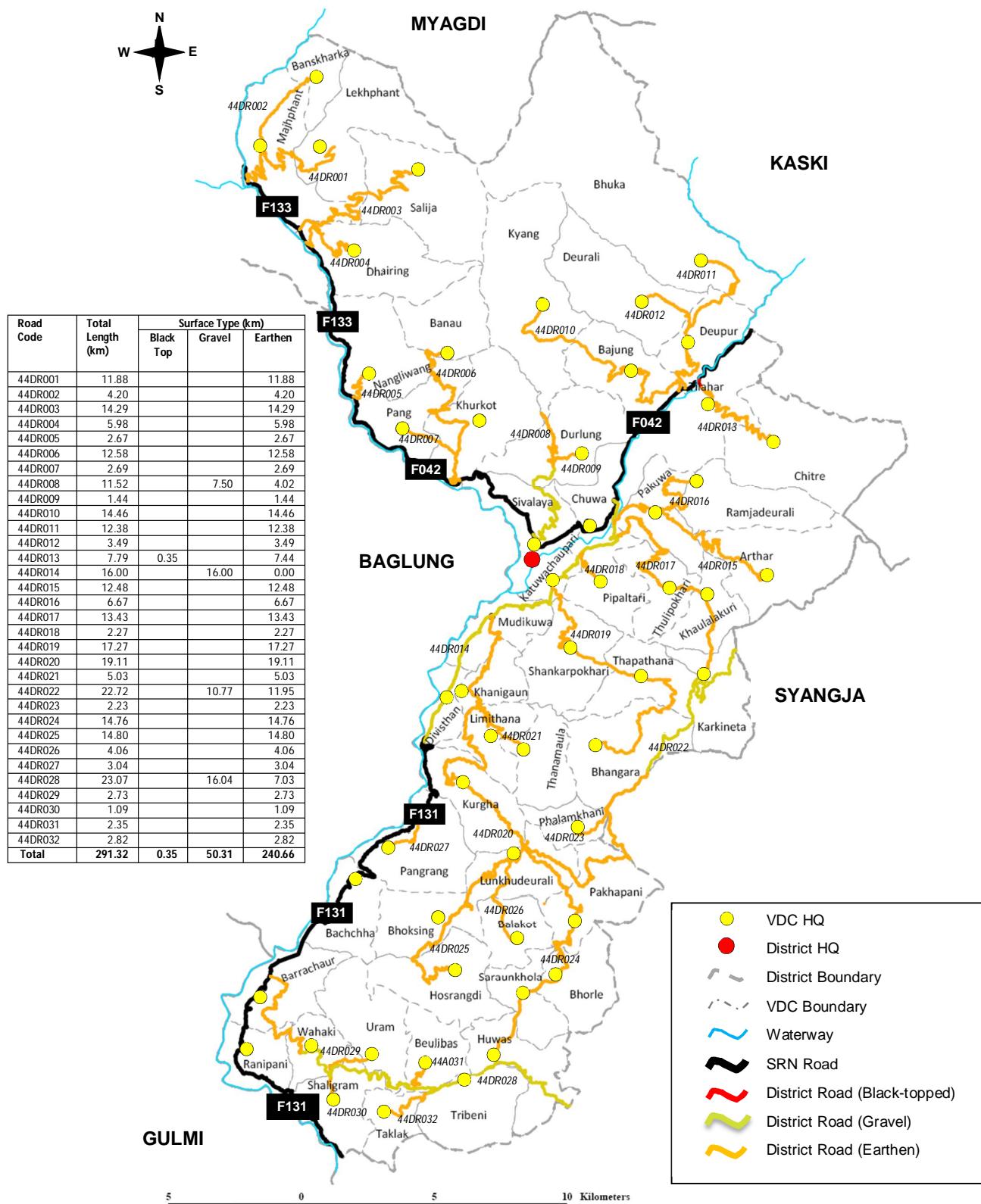


Figure 3 District Road Core Network Map of Parbat



3. District transport perspective plan (DTPP)

This chapter looks at the required interventions regarding conservation, improvement and new construction of the district road core network. It provides a complete list of all works required in the DRCN, which together form the District Transport Perspective Plan (DTPP). For the works forming part of the DTPP, chapter 4 will subsequently provide cost estimation, while chapter 5 will rank the works according to priority and chapter 6 will select those priority works that can be carried out in the next 5 years and thus form part of the District Transport Master Plan (DTMP).

3.1 Conservation

Conservation refers to the actions required to repair a road and keep it in good and passable condition. For DTMP planning purposes standard costs per kilometre for each maintenance type are applied to the entire district road core network, whereby for certain maintenance types, distinction is made according to the surface type of the road. Identification of the actual maintenance requirements of each road is made annually in the ARMP. Conservation activities include:

1. Emergency maintenance - Basic repairs aimed at removing landslides and repairing damage to the road that inhibit the proper use of the road and make it impassable. This mainly takes place during and after the rainy season. A provisional lumpsum is reserved for the entire district road core network based on the network length. Allocation to specific road sections is based on the actual need for clearing landslides or repairing washouts and cuts in the road.
2. Routine maintenance - General maintenance of the road aimed at preventing damage by ensuring the proper working of the different road elements (retaining walls, drainage system, carriageway, etc.) and cutting vegetation. This is carried out each year on a more or less continuous basis. Routine maintenance is required for the entire district road core network. The specific requirements for routine maintenance are determined on an annual basis through the road condition survey and defined in the ARMP.
3. Recurrent maintenance - Repairs of minor damage to the road surface and road structures to bring them back to good condition. This is generally carried out once or twice a year. Recurrent maintenance is required for the entire district road core network, whereby distinction is made according to the surface type. The specific requirements for recurrent maintenance are determined on an annual basis through the road condition survey and defined in the ARMP.
4. Periodic maintenance - Larger repairs to the road largely aimed at renewing the road surface through regravelling, resealing or overlays. It is generally carried out with several years interval. Although periodic maintenance is only required for specific sections of the district road core network, a lumpsum allocation is made for the entire district road core network based on average annual requirements, distinguishing between different surface types. The specific periodic maintenance requirements are determined on an annual basis through the annual road condition survey and defined in the ARMP.

The length of roads to be included under each conservation type for the first year is indicated below. This is basically the entire district road core network in as far as it does not require rehabilitation.

Table 3.1.1 Conservation Requirements

Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)
44DR001	11.875	11.875	11.875	11.875
44DR002	4.204	4.204	4.204	4.204
44DR003	14.291	14.291	14.291	14.291
44DR004	5.980	5.980	5.980	5.980

Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)
44DR005	2.670	2.670	2.670	2.670
44DR006	12.577	12.577	12.577	12.577
44DR007	2.687	2.687	2.687	2.687
44DR008	11.524	11.524	11.524	11.524
44DR009	1.441	1.441	1.441	1.441
44DR010	14.458	14.458	14.458	14.458
44DR011	12.382	12.382	12.382	12.382
44DR012	3.494	3.494	3.494	3.494
44DR013	7.793	7.793	7.793	7.793
44DR014	16.000	16.000	16.000	16.000
44DR015	12.481	12.481	12.481	12.481
44DR016	6.668	6.668	6.668	6.668
44DR017	13.433	13.433	13.433	13.433
44DR018	2.268	2.268	2.268	2.268
44DR019	17.270	17.270	17.270	17.270
44DR020	19.111	19.111	19.111	19.111
44DR021	5.032	5.032	5.032	5.032
44DR022	22.718	22.718	22.718	22.718
44DR023	2.233	2.233	2.233	2.233
44DR024	14.764	14.764	14.764	14.764
44DR025	14.804	14.804	14.804	14.804
44DR026	4.061	4.061	4.061	4.061
44DR027	3.038	3.038	3.038	3.038
44DR028	23.069	23.069	23.069	23.069
44DR029	2.729	2.729	2.729	2.729
44DR030	1.089	1.089	1.089	1.089
44DR031	2.352	2.352	2.352	2.352
44DR032	2.821	2.821	2.821	2.821
Total	291.32	291.32	291.32	291.32

3.2 Improvement

Improvement refers to actions required to improve a road to bring it to a maintainable all-weather standard. It includes the following actions, which for Parbat are described in more detail in the subsequent sections.

1. Rehabilitation - Significant repairs required to bring a very poor road back to a maintainable standard. This does not include any changes to the original surface type.
2. Gravelling - Placement of a gravel layer to make it all-weather and ensure that the road remains passable during the rainy season.
3. Cross drainage - Placement of suitable cross-drainage structures with the aim of making the road all-weather and ensuring that the road remains passable even during the rainy season.
4. Protective structures - Placement of retaining walls and lined side drains to avoid excessive damage to the road during the rainy season and bring it to a maintainable standard.
5. Blacktopping - Placement of a blacktop layer in roads with traffic volumes exceeding 100 passenger car units (PCU) to reduce damage to the road surface.
6. Widening - Increase of the road width in roads with traffic volumes exceeding 500 passenger car units (PCU) to ensure the proper flow of traffic.

3.2.1 Rehabilitation

Rehabilitation needs were identified in 5 roads of district road core network with a total length of 12 km as given in table below.

Table 3.2.1 Sections of the District Road Core Network Requiring Rehabilitation

Code	Name of Road	Total length (km)	Rehabilitation (km)
44DR004	Milanchowk-Salyan-Ghakhet	5.98	5.98
44DR027	Sirkang (Lokmarg)-Pangrang VDC Office	3.04	1.00
44DR029	Urampokhara-Wahakibhajyang	2.73	2.73
44DR031	Duda-Maidan (Beulibas)	2.35	1.00
44DR032	Arnas (Arthung)-Taklak VDC Office	2.82	1.00
Total			11.71

3.2.2 Gravelling

As the entire district road core network needs to be brought to an all-weather status, gravelling of the road surface is required for all the earthen sections in the DRCN. For Parbat this concerns the total of 241 km of DRCN roads.

Table 3.2.2 Sections of the District Road Core Network Requiring Gravelling

Code	Name of Road	Total length (km)	Gravelling (km)
44DR001	Waribeni-Manjhphant-Lekhphant (Annechaur)	11.88	11.88
44DR002	Mallaj (Kotghar)-Banskarka (Upallo) VDC Office	4.20	4.20
44DR003	Millanchowk-Ratamata/Bhotedanda-Salija VDC Office	14.29	14.29
44DR004	Milanchowk-Salyan-Ghakhet	5.98	5.98
44DR005	Khaniyagh- Nanglibang (VDC Office)	2.67	2.67
44DR006	Armad-Bhatebari-Banau Bazaar	12.58	12.58
44DR007	Bagaicha-Badahare (VDC Office)	2.69	2.69
44DR008	Kushma-Halhale School	11.52	4.02
44DR009	Padamkholsi-Sarunchaur (VDC Office)	1.44	1.44
44DR010	Paticaur-Bajung-Kyang (VDC Office)	14.46	14.46
44DR011	Paticaur-Maidan-Labsibot (VDC Office)	12.38	12.38
44DR012	Maidan (Deupur)-Purnagoan (VDC Office)	3.49	3.49
44DR013	Dimuwa-Darak-Chitre (VDC Office)	7.79	7.44
44DR014	Dovilla-Cyclechowk-Phalebas Dhika	16.00	-
44DR015	Dovilla Bridge-Pakuwa-Gangate-Arthar	12.48	12.48
44DR016	Pakuwa-Chhapa-Ramjathanti	6.67	6.67
44DR017	Silmi-Thulipokhari-Karkineta	13.43	13.43
44DR018	Thausekhola-Bitlab-Pipaltari (VDC Office)	2.27	2.27
44DR019	Cyclechowk-Chuchundeurali-Thapathan-Bhangara (VDC Office)	17.27	17.27
44DR020	Mudikuwa-Jhaklak-Kurgha-Lunkhu	19.11	19.11
44DR021	Lamayakhola-Limithana-Thanamaula VDC Office	5.03	5.03
44DR022	Hilekhola-Karkineta-Lunkhu	22.72	11.95
44DR023	Phalamkhani (Dandakateri)-Ghante	2.23	2.23
44DR024	Lunkhu-Jyamire-Huwas	14.76	14.76
44DR025	Lunkhu-Payubhanjyang-Hosrangdi VDC Office	14.80	14.80
44DR026	Lunkhu-Balakot (Daha)	4.06	4.06
44DR027	Sirkang (Lokmarg)-Pangrang VDC Office	3.04	3.04
44DR028	Chisapani-Huwa-Wahakibhanjyang-Barrachaur (Lokmarg)	23.07	7.03
44DR029	Urampokhara-Wahakibhajyang	2.73	2.73
44DR030	Wahakibhajyang-Salgram VDC Office	1.09	1.09
44DR031	Duda-Maidan (Beulibas)	2.35	2.35
44DR032	Arnas (Arthung)-Taklak VDC Office	2.82	2.82
Total		291.32	240.66

3.2.3 Cross drainage

The need for cross drainage was identified for the different DRCN roads. A total of 5 bridges with a total length of 210m, 3 slab culverts with a total length of 50m, 17 cement concrete causeway with a total length of 240m, 25 stone causeways with a total length of 395m, and 92 pipe culverts were identified as being required.

Table 3.2.3 Required Cross Drainage Structures

Code	Description	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)
44DR001	Waribenii-Manjhphant-Lekhphant (Annechaur)	-	-	-	-	2
44DR002	Mallaj (Kotghar)-Banskarka (Upallo) VDC Office	-	-	-	-	4
44DR003	Millanchowk-Ratamata/Bhotedanda-Salija VDC Office	40	-	15	15	2
44DR004	Milanchowk-Salyan-Ghakhet	-	-	10	10	2
44DR005	Khaniyaghat-Nanglibang (VDC Office)	-	-	-	-	2
44DR006	Armadi-Bhatebari-Banau Bazaar	-	-	-	-	2
44DR007	Bagaicha-Badahare (VDC Office)	-	-	-	-	12
44DR008	Kushma-Halhale School	-	-	-	-	2
44DR009	Padamkholsi-Sarunchaur (VDC Office)	-	-	-	-	4
44DR010	Patichaur-Bajung-Kyang (VDC Office)	-	10	30	20	4
44DR011	Patichaur-Maidan-Labsibot (VDC Office)	-	-	20	20	2
44DR012	Maidan (Deupur)-Purnagoan (VDC Office)	-	-	10	20	2
44DR013	Dimuwa-Darak-Chitre (VDC Office)	50	-	-	20	3
44DR014	Dovilla-Cyclechowk-Phalebas Dhika	-	-	-	-	-
44DR015	Dovilla Bridge-Pakuwa-Gangate-Arthar	40	20	-	-	-
44DR016	Pakuwa-Chhapa-Ramjathanti	-	-	-	15	2
44DR017	Silmi-Thulipokhari-Karkineta	-	-	30	-	3
44DR018	Thausekhola-Bitlab-Pipaltari (VDC Office)	-	-	-	10	4
44DR019	Cyclechowk-Chuchundearali-Thapathan-Bhangara (VDC Office)	50	-	30	-	3
44DR020	Mudikuwa-Jhaklak-Kurgha-Lunkhu	-	20	-	20	-
44DR021	Lamayakhola-Limithana-Thanamaula VDC Office	-	-	-	20	2
44DR022	Hilekhola-Karkineta-Lunkhu	-	-	20	20	5
44DR023	Phalamkhani (Dandakateri)-Ghante	-	-	-	-	1
44DR024	Lunkhu-Jyamire-Huwas	30	-	30	40	5
44DR025	Lunkhu-Payubhanijyang-Hosrangdi VDC Office	-	-	-	30	4
44DR026	Lunkhu-Balakot (Daha)	-	-	-	30	8
44DR027	Sirkang (Lokmarg)-Pangrang VDC Office	-	-	10	15	2
44DR028	Chisapani-Huwa-Wahakibhanijyang-Barrachaur (Lokmarg)	-	-	15	30	4
44DR029	Urampokhara-Wahakibhajyang	-	-	-	-	2
44DR030	Wahakibhajyang-Salgram VDC Office	-	-	-	50	2
44DR031	Duda-Maidan (Beulibas)	-	-	10	-	1
44DR032	Arnas (Arthung)-Taklak VDC Office	-	-	10	10	1
Total		210	50	240	395	92

3.2.4 Protective structures

Based on the road survey carried out in Parbat, the following retaining walls were identified as being required to ensure the protection of the district road core network with 415 m³ of masonry work, 12170 m³ of gabion walls and 141 km of line drain.

Table 3.2.4 Required Protective Structures

Code	Description	Masonry walls (m3)	Gabion walls (m3)	Lined drain (m)
44DR001	Wariben-Manjhphant-Lekhphant (Annechaur)	-	500	8,000
44DR002	Mallaj (Kotghar)-Banskarka (Upallo) VDC Office	-	500	2,500
44DR003	Millanchowk-Ratamata/Bhotedanda-Salija VDC Office	60	300	8,000
44DR004	Milanchowk-Salyan-Ghakhet	75	400	4,000
44DR005	Khaniyaghant-Nanglibang (VDC Office)	-	200	2,200
44DR006	Armadi-Bhatebari-Banau Bazaar	-	300	6,000
44DR007	Bagaicha-Badahare (VDC Office)	30	500	1,200
44DR008	Kushma-Halhale School	-	-	3,500
44DR009	Padamkholsi-Sarunchaur (VDC Office)	-	150	1,000
44DR010	Patichaur-Bajung-Kyang (VDC Office)	100	600	8,000
44DR011	Patichaur-Maidan-Labsibot (VDC Office)	-	400	7,000
44DR012	Maidan (Deupur)-Purnagoan (VDC Office)	-	500	2,500
44DR013	Dimuwa-Darak-Chitre (VDC Office)	-	400	6,500
44DR014	Dovilla-Cyclechowk-Phalebas Dhika	-	-	-
44DR015	Dovilla Bridge-Pakuwa-Gangate-Arthar	-	350	8,000
44DR016	Pakuwa-Chhapa-Ramjathanti	-	500	4,500
44DR017	Silmi-Thulipokhari-Karkineta	50	500	7,000
44DR018	Thausekhola-Bitlab-Pipaltari (VDC Office)	-	150	2,000
44DR019	Cyclechowk-Chuchundearali-Thapathan-Bhangara (VDC Office)	-	400	10,000
44DR020	Mudikuwa-Jhaklak-Kurgha-Lunkhu	-	500	10,000
44DR021	Lamayakhola-Limithana-Thanamaula VDC Office	-	200	4,000
44DR022	Hilekhola-Karkineta-Lunkhu	-	300	4,000
44DR023	Phalamkhani (Dandakateri)-Ghante	-	120	1,200
44DR024	Lunkhu-Jyamire-Huwas	100	500	6,000
44DR025	Lunkhu-Payubhanjyang-Hosrangdi VDC Office	-	800	10,000
44DR026	Lunkhu-Balakot (Daha)	-	800	2,500
44DR027	Sirkang (Lokmarg)-Pangrang VDC Office	-	500	2,000
44DR028	Chisapani-Huwa-Wahakibhanjyang-Barrachaur (Lokmarg)	-	500	4,000
44DR029	Urampokhara-Wahakibhajyang	-	500	1,500
44DR030	Wahakibhajyang-Salgram VDC Office	-	250	800
44DR031	Duda-Maidan (Beulibas)	-	250	1,200
44DR032	Arnas (Arthung)-Taklak VDC Office	-	300	1,500
Total		415	12,170	140,600

3.2.5 Widening

Widening of the district road core network in Parbat is required only in specific locations to bring it up to the minimum standard and to ensure sufficient space in the curves. Additional widening to a higher standard is not required because traffic volumes remain very low. However, about 50 km of length has to be additionally widened in 32 roads under DRCN.

Table 3.2.5 Sections of the District Road Core Network Requiring Widening

Code	Description	Total length (km)	Widening (m)
44DR001	Wariben-Manjhphant-Lekhphant (Annechaur)	11.875	2000
44DR002	Mallaj (Kotghar)-Banskarka (Upallo) VDC Office	4.204	2000
44DR003	Millanchowk-Ratamata/Bhotedanda-Salija VDC Office	14.291	2000
44DR004	Milanchowk-Salyan-Ghakhet	5.980	2500
44DR005	Khaniyaghant-Nanglibang (VDC Office)	2.670	500
44DR006	Armadi-Bhatebari-Banau Bazaar	12.577	1500

Code	Description	Total length (km)	Widening (m)
44DR007	Bagaicha-Badahare (VDC Office)	2.687	600
44DR008	Kushma-Halhale School	11.524	-
44DR009	Padamkholsi-Sarunchaur (VDC Office)	1.441	600
44DR010	Patichaur-Bajung-Kyang (VDC Office)	14.458	2500
44DR011	Patichaur-Maidan-Labsibot (VDC Office)	12.382	1000
44DR012	Maidan (Deupur)-Purnagoan (VDC Office)	3.494	2000
44DR013	Dimuwa-Darak-Chitre (VDC Office)	7.793	2000
44DR014	Dovilla-Cyclechowk-Phalebas Dhika	16.000	-
44DR015	Dovilla Bridge-Pakuwa-Gangate-Arthar	12.481	2500
44DR016	Pakuwa-Chhapa-Ramjathanti	6.668	3000
44DR017	Silmi-Thulipokhari-Karkineta	13.433	1500
44DR018	Thausekhola-Bitlab-Pipaltari (VDC Office)	2.268	600
44DR019	Cyclechowk-Chuchundeurali-Thapathan-Bhangara (VDC Office)	17.270	4000
44DR020	Mudikuwa-Jhaklak-Kurgha-Lunkhu	19.111	4000
44DR021	Lamayakhola-Limithana-Thanamaula VDC Office	5.032	1000
44DR022	Hilekhola-Karkineta-Lunkhu	22.718	800
44DR023	Phalamkhani (Dandakateri)-Ghante	2.233	200
44DR024	Lunkhu-Jyamire-Huwas	14.764	2000
44DR025	Lunkhu-Payubhanjyang-Hosrangdi VDC Office	14.804	2000
44DR026	Lunkhu-Balakot (Daha)	4.061	1000
44DR027	Sirkang (Lokmarg)-Panrang VDC Office	3.038	1000
44DR028	Chisapani-Huwa-Wahakibhanjyang-Barrachaur (Lokmarg)	23.069	3000
44DR029	Urampokhara-Wahakibhajyang	2.729	1000
44DR030	Wahakibhajyang-Salgram VDC Office	1.089	500
44DR031	Duda-Maidan (Beulibas)	2.352	1000
44DR032	Arnas (Arthung)-Taklak VDC Office	2.821	1000
Total		291.32	49300

3.2.6 Blacktopping

An analysis of the traffic data of different roads under district road core network, no any of roads exceeds 100 PCU, i.e. for upgrading to blacktop standard needs >100 PCU as threshold for the roads in the hills (**Annex 1**). Hence no road is found to be proposed for blacktopping.

Table 3.2.6 Sections of the District Road Core Network Requiring Blacktopping

Code	Description	Total length (km)	Blacktop (km)	Traffic (VPD)	Blacktopping (km)
Total		-	-	-	-

3.3 New construction

In Parbat, no need of proposing any new network to make access for any VDC, i.e. all the VDCs are already been connected with the roads. Nevertheless, a small critical section of 60m length has to be newly constructed in order to join the already constructed either sections of the road as given in Table 3.3.1.

Table 3.3.1 Sections of the District Road Core Network Requiring New Construction

Code	Description	New VDCs	Existing length	New length	Bridge (m)
44DR001	Waribeni-Manjhphant-Lekhphant (Annechaur)		11.88	0.060	
Total		-	-	0.060	-

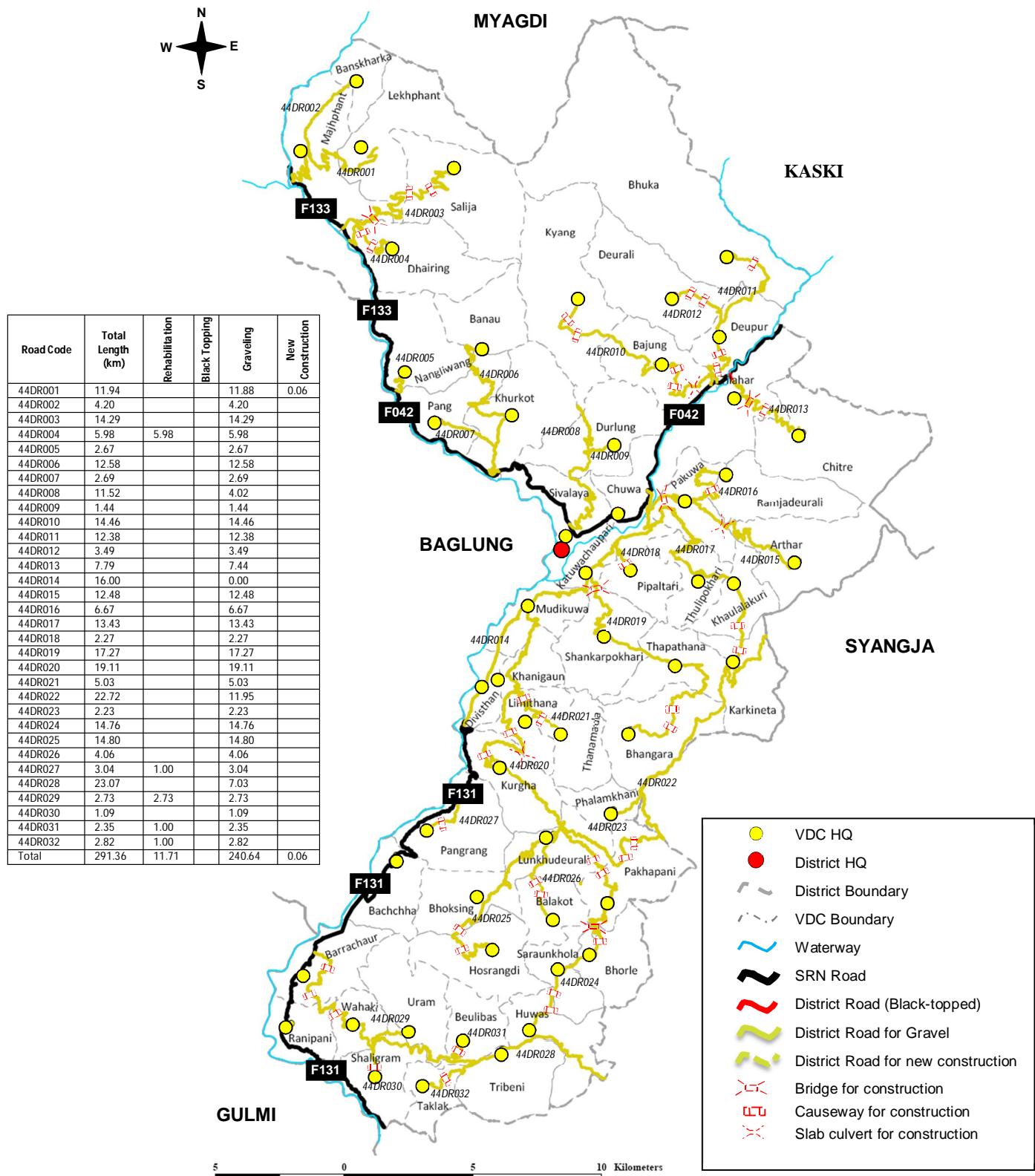
3.4 District Transport Perspective Plan

The DTPP anticipates bringing the entire existing district road core network to maintainable all-weather status. For this purpose, all 241 km will be gravelled along with a number of different cross drainage and protective structures will be constructed. A small critical new section of 60m of existing road will be constructed. The district road core network will subsequently consist of 292 km of maintainable all-weather roads. The following table (3.4.1) lists the required interventions, while the proposed network is shown in the DTPP map in figure 4 at the end of this chapter.

Table 3.4.1 District Transport Perspective Plan

Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)	Rehabilitation (km)	Gravelling (km)	Blacktopping (km)	Widening (m)	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)	Masonry walls (m3)	Gabion walls (m3)	Lined drain (m)	New construction (km)
44DR001	11.88	11.88	11.88	11.88	-	11.88	-	2,000	-	-	-	-	2	-	500	8000	0.06
44DR002	4.20	4.20	4.20	4.20	-	4.20	-	2,000	-	-	-	-	4	-	500	2500	-
44DR003	14.29	14.29	14.29	14.29	-	14.29	-	2,000	40	-	15	15	2	60	300	8000	-
44DR004	5.98	5.98	5.98	5.98	5.98	5.98	-	2,500	-	-	10	10	2	75	400	4000	-
44DR005	2.67	2.67	2.67	2.67	-	2.67	-	500	-	-	-	-	2	-	200	2200	-
44DR006	12.58	12.58	12.58	12.58	-	12.58	-	1,500	-	-	-	-	2	-	300	6000	-
44DR007	2.69	2.69	2.69	2.69	-	2.69	-	600	-	-	-	-	12	30	500	1200	-
44DR008	11.52	11.52	11.52	11.52	-	4.02	-	-	-	-	-	-	2	-	-	3500	-
44DR009	1.44	1.44	1.44	1.44	-	1.44	-	600	-	-	-	-	4	-	150	1000	-
44DR010	14.46	14.46	14.46	14.46	-	14.46	-	2,500	-	10	30	20	4	100	600	8000	-
44DR011	12.38	12.38	12.38	12.38	-	12.38	-	1,000	-	-	20	20	2	-	400	7000	-
44DR012	3.49	3.49	3.49	3.49	-	3.49	-	2,000	-	-	10	20	2	-	500	2500	-
44DR013	7.79	7.79	7.79	7.79	-	7.44	-	2,000	50	-	-	20	3	-	400	6500	-
44DR014	16.00	16.00	16.00	16.00	-	-	-	-	-	-	-	-	-	-	-	0	-
44DR015	12.48	12.48	12.48	12.48	-	12.48	-	2,500	40	20	-	-	-	-	350	8000	-
44DR016	6.67	6.67	6.67	6.67	-	6.67	-	3,000	-	-	-	15	2	-	500	4500	-
44DR017	13.43	13.43	13.43	13.43	-	13.43	-	1,500	-	-	30	-	3	50	500	7000	-
44DR018	2.27	2.27	2.27	2.27	-	2.27	-	600	-	-	-	10	4	-	150	2000	-
44DR019	17.27	17.27	17.27	17.27	-	17.27	-	4,000	50	-	30	-	3	-	400	10000	-
44DR020	19.11	19.11	19.11	19.11	-	19.11	-	4,000	-	20	-	20	-	-	500	10000	-
44DR021	5.03	5.03	5.03	5.03	-	5.03	-	1,000	-	-	-	20	2	-	200	4000	-
44DR022	22.72	22.72	22.72	22.72	-	11.95	-	800	-	-	20	20	5	-	300	4000	-
44DR023	2.23	2.23	2.23	2.23	-	2.23	-	200	-	-	-	-	1	-	120	1200	-
44DR024	14.76	14.76	14.76	14.76	-	14.76	-	2,000	30	-	30	40	5	100	500	6000	-
44DR025	14.80	14.80	14.80	14.80	-	14.80	-	2,000	-	-	-	30	4	-	800	10000	-
44DR026	4.06	4.06	4.06	4.06	-	4.06	-	1,000	-	-	-	30	8	-	800	2500	-
44DR027	3.04	3.04	3.04	3.04	1.00	3.04	-	1,000	-	-	10	15	2	-	500	2000	-
44DR028	23.07	23.07	23.07	23.07	-	7.03	-	3,000	-	-	15	30	4	-	500	4000	-
44DR029	2.73	2.73	2.73	2.73	2.73	2.73	-	1,000	-	-	-	-	2	-	500	1500	-
44DR030	1.09	1.09	1.09	1.09	-	1.09	-	500	-	-	-	50	2	-	250	800	-
44DR031	2.35	2.35	2.35	2.35	1.00	2.35	-	1,000	-	-	10	-	1	-	250	1200	-
44DR032	2.82	2.82	2.82	2.82	1.00	2.82	-	1,000	-	-	10	10	1	-	300	1500	-
Total	291.32	291.32	291.32	291.32	11.71	240.66	-	49300	210	50	240	395	92	415	12170	140600	0.06

Figure 4 District Transport Perspective Plan (DTPP) Map of Parbat



4. Cost Estimation

For the cost estimation, standard costs have been made for the different activities required. For the conservation activities this results in an estimation of annual costs, while for improvement and new construction activities these results in an estimation of the total costs required.

4.1 Conservation

The costs of the required conservation measures have been calculated using the following standard costs. These standard costs have been applied to the entire district road core network, whereby distinction is made based on the surface type in the case of recurrent and periodic maintenance. It must be noted here that the standard costs for periodic maintenance are the average annual costs, but that the cost for applying periodic maintenance in a specific section every several years will be higher (the cumulative cost of several years). The estimated costs for the first year are presented below, while the costs for subsequent years will vary slightly as road surface types change as a result of improvements. Detailed cost estimations for the actual maintenance needs in any given year will be presented in the ARMP.

Table 4.1.1 Standard Unit Costs for Conservation

Activity	Unit	Unit cost (NPR)
Emergency maintenance	km	30,000
Routine maintenance	km	20,000
Recurrent maintenance (blacktop)	km	500,000
Recurrent maintenance (gravel)	km	400,000
Recurrent maintenance (earthen)	km	250,000
Periodic maintenance (blacktop)	km	200,000
Periodic maintenance (gravel)	km	250,000

For the first year the estimated costs for conservation of the DRCN come to NPR 108 million. Based on this cost for the first year, the costs for conservation of the DRCN for the next 5 years are estimated at NPR 538 million. These costs will change slightly as the roads are improved and the standard conservation costs change. This will be updated in the ARMP on an annual basis.

Table 4.1.2 Estimated Conservation Costs for the First Year (NPR '000)

Code	Total length (km)	Blacktop (km)	Gravel (km)	Earthen (km)	Emergency maintenance	Routine maintenance	Recurrent maintenance (blacktop)	Recurrent maintenance (gravel)	Recurrent maintenance (earthen)	Periodic maintenance (blacktop)	Periodic maintenance (gravel)	Total first year cost	Total 5-year cost
44DR001	11.88	0.00	0.00	11.88	356	238	-	-	2,969	-	-	3,563	17,813
44DR002	4.20	0.00	0.00	4.20	126	84	-	-	1,051	-	-	1,261	6,306
44DR003	14.29	0.00	0.00	14.29	429	286	-	-	3,573	-	-	4,287	21,437
44DR004	5.98	0.00	0.00	5.98	179	120	-	-	1,495	-	-	1,794	8,970
44DR005	2.67	0.00	0.00	2.67	80	53	-	-	668	-	-	801	4,005
44DR006	12.58	0.00	0.00	12.58	377	252	-	-	3,144	-	-	3,773	18,866
44DR007	2.69	0.00	0.00	2.69	81	54	-	-	672	-	-	806	4,031
44DR008	11.52	0.00	7.50	4.02	346	230	-	3,000	1,006	-	1,875	6,457	32,286
44DR009	1.44	0.00	0.00	1.44	43	29	-	-	360	-	-	432	2,162
44DR010	14.46	0.00	0.00	14.46	434	289	-	-	3,615	-	-	4,337	21,687
44DR011	12.38	0.00	0.00	12.38	371	248	-	-	3,096	-	-	3,715	18,573
44DR012	3.49	0.00	0.00	3.49	105	70	-	-	874	-	-	1,048	5,241
44DR013	7.79	0.35	0.00	7.44	234	156	175	-	1,861	-	-	2,425	12,127
44DR014	16.00	0.00	16.00	0.00	480	320	-	6,400	-	-	4,000	11,200	56,000
44DR015	12.48	0.00	0.00	12.48	374	250	-	-	3,120	-	-	3,744	18,722
44DR016	6.67	0.00	0.00	6.67	200	133	-	-	1,667	-	-	2,000	10,002
44DR017	13.43	0.00	0.00	13.43	403	269	-	-	3,358	-	-	4,030	20,150
44DR018	2.27	0.00	0.00	2.27	68	45	-	-	567	-	-	680	3,402
44DR019	17.27	0.00	0.00	17.27	518	345	-	-	4,318	-	-	5,181	25,905
44DR020	19.11	0.00	0.00	19.11	573	382	-	-	4,778	-	-	5,733	28,667
44DR021	5.03	0.00	0.00	5.03	151	101	-	-	1,258	-	-	1,510	7,548
44DR022	22.72	0.00	10.77	11.95	682	454	-	4,306	2,988	-	2,691	11,121	55,607
44DR023	2.23	0.00	0.00	2.23	67	45	-	-	558	-	-	670	3,350
44DR024	14.76	0.00	0.00	14.76	443	295	-	-	3,691	-	-	4,429	22,146
44DR025	14.80	0.00	0.00	14.80	444	296	-	-	3,701	-	-	4,441	22,206
44DR026	4.06	0.00	0.00	4.06	122	81	-	-	1,015	-	-	1,218	6,092
44DR027	3.04	0.00	0.00	3.04	91	61	-	-	760	-	-	911	4,557
44DR028	23.07	0.00	16.04	7.03	692	461	-	6,416	1,757	-	4,010	13,337	66,684
44DR029	2.73	0.00	0.00	2.73	82	55	-	-	682	-	-	819	4,094
44DR030	1.09	0.00	0.00	1.09	33	22	-	-	272	-	-	327	1,634
44DR031	2.35	0.00	0.00	2.35	71	47	-	-	588	-	-	706	3,528
44DR032	2.82	0.00	0.00	2.82	85	56	-	-	705	-	-	846	4,232
Total	291.317	0.35	50.31	240.66	8,740	5,826	175	20,122	60,166	-	12,576	107,605	538,023

4.2 Improvement

The costs of the required improvement measures have been calculated using the following standard costs. These standard costs have been applied to the identified improvement requirements presented in the previous chapter.

Table 4.2.1 Standard Unit Costs for Improvement Activities

Activity	Unit	Unit cost (NPR)
Rehabilitation	km	800,000
Widening	m	5,000
Gravelling	km	2,200,000
Blacktopping	km	5,700,000
Bridge construction	m	600,000
Slab culvert construction	m	150,000
CC Causeway construction	m	100,000
Stone Causeway construction	m	10,000
Pipe culvert placement	unit	10,000
Masonry wall construction	m3	10,000
Gabion wall construction	m3	2,500
Lined drain construction	m	1,000

The resulting estimated costs come to NPR 1,123 million as indicated in the table below.

Table 4.2.2 Cost Estimate for Improvement Measures (NPR '000)

Code	Total length (km)	Rehabilitation	Widening	Gravelling	Blacktopping	Bridges	Slab culverts	CC causeways	Stone causeways	Pipe culvert	Masonry walls	Gabion walls	Lined drains	Total cost
44DR001	11.88	-	10,000	26,125	-	-	-	-	-	20	-	1,250	8,000	45,395
44DR002	4.20	-	10,000	9,249	-	-	-	-	-	40	-	1,250	2,500	23,039
44DR003	14.29	-	10,000	31,440	-	24,000	-	1,500	150	20	600	750	8,000	76,460
44DR004	5.98	4,784	12,500	13,156	-	-	-	1,000	100	20	750	1,000	4,000	37,310
44DR005	2.67	-	2,500	5,874	-	-	-	-	-	20	-	500	2,200	11,094
44DR006	12.58	-	7,500	27,669	-	-	-	-	-	20	-	750	6,000	41,939
44DR007	2.69	-	3,000	5,911	-	-	-	-	-	120	300	1,250	1,200	11,781
44DR008	11.52	-	-	8,853	-	-	-	-	-	20	-	-	3,500	12,373
44DR009	1.44	-	3,000	3,170	-	-	-	-	-	40	-	375	1,000	7,585
44DR010	14.46	-	12,500	31,808	-	-	1,500	3,000	200	40	1,000	1,500	8,000	59,548
44DR011	12.38	-	5,000	27,240	-	-	-	2,000	200	20	-	1,000	7,000	42,460
44DR012	3.49	-	10,000	7,687	-	-	-	1,000	200	20	-	1,250	2,500	22,657
44DR013	7.79	-	10,000	16,375	-	30,000	-	-	200	30	-	1,000	6,500	64,105
44DR014	16.00	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR015	12.48	-	12,500	27,458	-	24,000	3,000	-	-	-	-	875	8,000	75,833
44DR016	6.67	-	15,000	14,670	-	-	-	-	150	20	-	1,250	4,500	35,590
44DR017	13.43	-	7,500	29,553	-	-	-	3,000	-	30	500	1,250	7,000	48,833
44DR018	2.27	-	3,000	4,990	-	-	-	-	100	40	-	375	2,000	10,505
44DR019	17.27	-	20,000	37,994	-	30,000	-	3,000	-	30	-	1,000	10,000	102,024
44DR020	19.11	-	20,000	42,044	-	-	3,000	-	200	-	-	1,250	10,000	76,494
44DR021	5.03	-	5,000	11,070	-	-	-	-	200	20	-	500	4,000	20,790
44DR022	22.72	-	4,000	26,297	-	-	-	2,000	200	50	-	750	4,000	37,297
44DR023	2.23	-	1,000	4,913	-	-	-	-	-	10	-	300	1,200	7,423
44DR024	14.76	-	10,000	32,481	-	18,000	-	3,000	400	50	1,000	1,250	6,000	72,181
44DR025	14.80	-	10,000	32,569	-	-	-	-	300	40	-	2,000	10,000	54,909
44DR026	4.06	-	5,000	8,934	-	-	-	-	300	80	-	2,000	2,500	18,814
44DR027	3.04	800	5,000	6,684	-	-	-	1,000	150	20	-	1,250	2,000	16,904
44DR028	23.07	-	15,000	15,464	-	-	-	1,500	300	40	-	1,250	4,000	37,554
44DR029	2.73	2,184	5,000	6,004	-	-	-	-	-	20	-	1,250	1,500	15,958
44DR030	1.09	-	2,500	2,396	-	-	-	-	500	20	-	625	800	6,841
44DR031	2.35	800	5,000	5,174	-	-	-	1,000	-	10	-	625	1,200	13,809
44DR032	2.82	800	5,000	6,206	-	-	-	1,000	100	10	-	750	1,500	15,366
Total	291.32	9,368	246,500	529,456	-	126,000	7,500	24,000	3,950	920	4,150	30,425	140,600	1,122,869

4.3 New construction

For new construction, the following standard costs have been applied to estimate the costs involved.

Table 4.3.1 Standard Unit Costs for New Construction

Activity	Unit	Unit cost (NPR)
Track opening	km	4,000,000
Gravelling	km	2,200,000
Bridge construction	m	600,000

The resulting estimated costs for new construction come to NPR 0.37 million.

Table 4.3.2 Cost Estimate for New Construction (NPR '000)

Code	Description	New length (km)	Opening up (NPR)	Gravelling (NPR)	Bridges (NPR)	Total cost (NPR)
44 DR 001	Waribeni-Manjhphant-Lekhphant (Annechaur)	0.06	240	132	-	372
	Total	0.06	240	132	-	372

4.4 DTPP COSTS

The total costs for the District Transport Perspective Plan come to NPR 1,642 million as indicated in the table below.

Table 4.4.1 DTPP Costs (NPR '000)

Code	Conservation	Improvement	New construction	Total
44DR001	17,813	45,395	372	63,580
44DR002	6,306	23,039	-	29,345
44DR003	21,437	76,460	-	97,897
44DR004	8,970	37,310	-	46,280
44DR005	4,005	11,094	-	15,099
44DR006	18,866	41,939	-	60,805
44DR007	4,031	11,781	-	15,812
44DR008	32,286	12,373	-	44,659
44DR009	2,162	7,585	-	9,747
44DR010	21,687	59,548	-	81,235
44DR011	18,573	42,460	-	61,033
44DR012	5,241	22,657	-	27,898
44DR013	12,127	64,105	-	76,232
44DR014	56,000	-	-	56,000
44DR015	18,722	75,833	-	94,555
44DR016	10,002	35,590	-	45,592
44DR017	20,150	48,833	-	68,982
44DR018	3,402	10,505	-	13,907
44DR019	25,905	102,024	-	127,929
44DR020	28,667	76,494	-	105,161
44DR021	7,548	20,790	-	28,338
44DR022	55,607	37,297	-	92,904
44DR023	3,350	7,423	-	10,772
44DR024	22,146	72,181	-	94,327
44DR025	22,206	54,909	-	77,115

Code	Conservation	Improvement	New construction	Total
44DR026	6,092	18,814	-	24,906
44DR027	4,557	16,904	-	21,461
44DR028	66,684	37,554	-	104,237
44DR029	4,094	15,958	-	20,051
44DR030	1,634	6,841	-	8,474
44DR031	3,528	13,809	-	17,337
44DR032	4,232	15,366	-	19,598
Total	533,792	1,107,503	372	1,641,667

5. Ranking

The ranking of the required interventions determines the order in which they will be carried out. This ranking is done separately for conservation, improvement and new construction. Ranking is done according to the cost per person served, whereby the costs are the estimated costs of the previous chapter. For the calculation of the population served, use is made of the population data for the VDCs linked by the road concerned. This data is presented in **Annex 2**.

5.1 Conservation

Ranking of roads for conservation is based on the total conservation costs per person served by the road. This ranking of roads will be updated each year in the ARMP based on the actual cost estimates for the year concerned. An example ranking is provided in the table below based on standard costs for the first year.

Table 5.1.1 Ranking of Conservation Works (NPR '000)

Code	Total length (km)	1. Emergency	2. Routine	3. Recurrent (paved)	4. Recurrent (gravel)	5. Recurrent (earth)	6. Periodic (blacktop)	7. Periodic (gravel)	Total cost (NPR '000)	Population served	Cost/person (NPR)
44DR017	13.43	403	269	-	-	3,358	-	-	4,030	44,773	90
44DR030	1.09	33	22	-	-	272	-	-	327	2,681	122
44DR014	16.00	480	320	-	6,400	-	-	4,000	11,200	80,698	139
44DR020	19.11	573	382	-	-	4,778	-	-	5,733	41,010	140
44DR002	4.20	126	84	-	-	1,051	-	-	1,261	9,003	140
44DR009	1.44	43	29	-	-	360	-	-	432	3,024	143
44DR024	14.76	443	295	-	-	3,691	-	-	4,429	26,654	166
44DR007	2.69	81	54	-	-	672	-	-	806	4,566	177
44DR026	4.06	122	81	-	-	1,015	-	-	1,218	5,524	221
44DR012	3.49	105	70	-	-	874	-	-	1,048	4,653	225
44DR025	14.80	444	296	-	-	3,701	-	-	4,441	19,009	234
44DR006	12.58	377	252	-	-	3,144	-	-	3,773	14,985	252
44DR031	2.35	71	47	-	-	588	-	-	706	2,757	256
44DR001	11.88	356	238	-	-	2,969	-	-	3,563	13,789	258
44DR018	2.27	68	45	-	-	567	-	-	680	2,407	283
44DR005	2.67	80	53	-	-	668	-	-	801	2,751	291
44DR029	2.73	82	55	-	-	682	-	-	819	2,415	339
44DR008	11.52	346	230	-	3,000	1,006	-	1,875	6,457	17,452	370
44DR013	7.79	234	156	175	-	1,861	-	-	2,425	6,354	382
44DR021	5.03	151	101	-	-	1,258	-	-	1,510	3,833	394
44DR019	17.27	518	345	-	-	4,318	-	-	5,181	13,149	394
44DR027	3.04	91	61	-	-	760	-	-	911	2,223	410
44DR016	6.67	200	133	-	-	1,667	-	-	2,000	4,814	416

Code	Total length (km)	1. Emergency	2. Routine	3. Recurrent (paved)	4. Recurrent (gravel)	5. Recurrent (earth)	6. Periodic (blacktop)	7. Periodic (gravel)	Total cost (NPR '000)	Population served	Cost/person (NPR)
44DR015	12.48	374	250	-	-	3,120	-	-	3,744	8,333	449
44DR004	5.98	179	120	-	-	1,495	-	-	1,794	3,456	519
44DR011	12.38	371	248	-	-	3,096	-	-	3,715	6,965	533
44DR028	23.07	692	461	-	6,416	1,757	-	4,010	13,337	22,612	590
44DR032	2.82	85	56	-	-	705	-	-	846	1,424	594
44DR010	14.46	434	289	-	-	3,615	-	-	4,337	6,186	701
44DR023	2.23	67	45	-	-	558	-	-	670	917	731
44DR003	14.29	429	286	-	-	3,573	-	-	4,287	4,786	896
44DR022	22.72	682	454	-	4,306	2,988	-	2,691	11,121	10,782	1,031

The allocation of maintenance funding will follow a specific sequence indicated below, and will be applied to the road ranking as defined in the ARMP. This will be of particular importance where funding is insufficient to cover all conservation costs.

1. Emergency maintenance
2. Routine maintenance
3. Recurrent maintenance paved roads
4. Recurrent maintenance gravel roads
5. Recurrent maintenance earthen roads
6. Periodic maintenance blacktop roads
7. Periodic maintenance gravel roads

5.2 Improvement

In the case of improvement activities, ranking is again based on the basis of the total cost per person served. The resulting order of the roads is shown in the table below. In the case of roads requiring blacktopping, the improvement of the road has been split into two phases. The first phase includes all improvements to bring the road to a maintainable all-weather standard (gravelling, widening, cross drainage and protective structures), while the second phase only includes the blacktopping. This has been done to avoid unnecessarily delaying the improvement of such roads to all-weather gravel standard due to the additional cost of blacktopping (increasing the cost per person served).

Table 5.2.1 Ranking of Improvement Works (NPR '000)

Code	Total length (km)	Gravelling (km)	Blacktopping (km)	Total cost (NPR '000)	Population served	Cost/person (NPR)
44DR014	16.00	-	-	-	80,698	-
44DR008	11.52	4.02	-	12,373	17,452	709
44DR017	13.43	13.43	-	48,833	44,773	1,091
44DR020	19.11	19.11	-	76,494	41,010	1,865
44DR024	14.76	14.76	-	72,181	26,654	2,708
44DR028	23.07	7.03	-	37,554	22,612	1,661
44DR006	12.58	12.58	-	41,939	14,985	2,799
44DR022	22.72	11.95	-	37,297	10,782	3,459
44DR025	14.80	14.80	-	54,909	19,009	2,889
44DR007	2.69	2.69	-	11,781	4,566	2,580
44DR001	11.88	11.88	-	45,395	13,789	3,292
44DR030	1.09	1.09	-	6,841	2,681	2,552
44DR009	1.44	1.44	-	7,585	3,024	2,508
44DR002	4.20	4.20	-	23,039	9,003	2,559
44DR026	4.06	4.06	-	18,814	5,524	3,406

Code	Total length (km)	Gravelling (km)	Blacktopping (km)	Total cost (NPR '000)	Population served	Cost/person (NPR)
44DR005	2.67	2.67	-	11,094	2,751	4,033
44DR011	12.38	12.38	-	42,460	6,965	6,096
44DR018	2.27	2.27	-	10,505	2,407	4,364
44DR021	5.03	5.03	-	20,790	3,833	5,424
44DR031	2.35	2.35	-	13,809	2,757	5,009
44DR023	2.23	2.23	-	7,423	917	8,094
44DR012	3.49	3.49	-	22,657	4,653	4,869
44DR019	17.27	17.27	-	102,024	13,149	7,759
44DR029	2.73	2.73	-	15,958	2,415	6,608
44DR015	12.48	12.48	-	75,833	8,333	9,100
44DR013	7.79	7.44	-	64,105	6,354	10,089
44DR027	3.04	3.04	-	16,904	2,223	7,604
44DR010	14.46	14.46	-	59,548	6,186	9,626
44DR016	6.67	6.67	-	35,590	4,814	7,393
44DR003	14.29	14.29	-	76,460	4,786	15,976
44DR032	2.82	2.82	-	15,366	1,424	10,791
44DR004	5.98	5.98	-	37,310	3,456	10,796

5.3 New construction

For the roads proposed for new construction, ranking is also according to the cost per person served by the new road. The resulting ranking is indicated in the table below.

Table 5.3.1 Ranking of Construction Works (NPR '000)

Code	Length (km)	Total cost (NPR '000)	Population served	Cost/person (NPR)
44 DR 001	0.06	372	13,916	27

6. District transport master plan (DTMP)

The District Transport Master Plan (DTMP) that covers the next five years is prepared based on the projected financial resources available and the prioritized transport interventions as listed in the DTPP. Year-wise targets are prepared for the different roads and intervention types.

6.1 Five year projected financial resources

The projected financial resources for the next five years are estimated by considering all possible funding sources. The funding levels are based on the existing trend of funding. An annual increase in funding of 20% is assumed for all funding sources. The total district budget for the road sector is NPR 1,320 million for the five-year period.

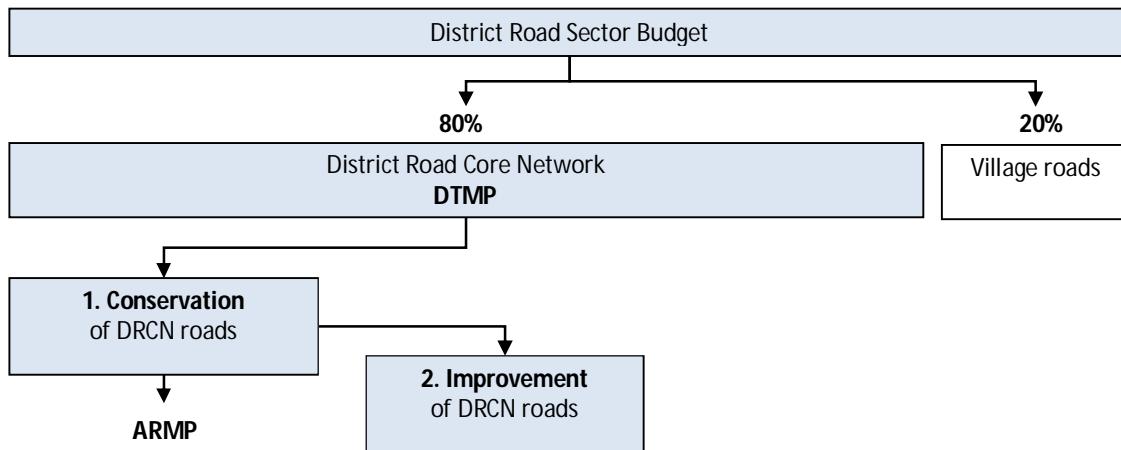
Table 6.1.1 Estimated Funding Levels (Roads) for Next Five Years (in NPR '000)

Funding source	069/70	070/71	071/72	072/73	073/74
RTI SWAp Regular and Additional	25,529	79,200	95,040	114,048	136,858
Road Board Nepal	2,400	2,640	2,904	3,194	3,514
DDC Internal Fund & MLD Grant	3,153	10,920	19,312	34,243	55,668
DFID additional Grant	12,554	-	-	-	-
Other donors	-	30,000	100,000	150,000	200,000
RTI SWAp –Bridge component	-	7,000	17,000	30,000	80,000
People Participation (20%)	17,120	18,832	20,715	22,787	25,065
Total	60,756	148,592	254,971	354,272	501,104
Grand total			1,319,696		

6.2 Budget allocation

The distribution of the available district road sector budget is indicated in the figure below. Due to the low importance along with comparatively less length of village roads, 80% of the total budget is reserved for the district road core network. The remaining 20% is to be used by the DDC for the village roads, giving priority to emergency maintenance and routine/recurrent maintenance. The 80% of the district road sector budget for the DTMP is allocated firstly to conservation, secondly improvement.

Figure 5 District Road Sector Budget Allocation



Based on this distribution of the estimated budget, the available annual budget for each intervention type and the resulting district road core network length by surface type has been calculated. The results are shown in the following table.

Table 6.2.1 Investment Plan

Item				Year																							
Fiscal year				2069/70			2070/71			2071/72			2072/73			2073/74											
Total budget				60,756			148,592			254,971			354,272			501,104											
Village roads				12,151			29,718			50,994			70,854			100,221											
Core road network budget (DTMP)				48,605			118,874			203,977			283,418			400,883											
Core network length (km)				291.32			291.32			291.32			291.32			291.32											
Blacktop (km)				0.35			0.35			0.35			0.35			0.35											
Gravel (km)				50.31			50.31			57.53			81.87			125.13											
Earthen (km)				240.66			240.66			233.43			209.10			165.84											
Conservation (NRs)				48,605			94,853			110,321			99,588			137,360											
Emergency				8,740			8,740			8,740			8,740			8,740											
Routine				5,826			5,826			5,826			5,826			5,826											
Recurrent (blacktop)																											
Recurrent (gravel)																20,122											
Recurrent (earthen)				34,039			60,166			58,358			52,274			41,459											
Periodic (blacktop)																											
Periodic (gravel)				-															31,283								
Improvement	Cost	BT	GR	0	BT	GR	24,020	BT	GR	93,656	BT	GR	183,830	BT	GR	263,523	BT	GR									
44DR014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
44DR008	12,373	-	4.02	-	-	-	12,373	-	4.02	-	-	-	-	-	-	-	-	-									
44DR017	48,833	-	13.43	-	-	-	11,647	-	3.20	37,185	-	10.23	-	-	-	-	-	-									
44DR020	76,494	-	19.11	-	-	-	-	-	-	56,471	-	14.11	20,023	-	5.00	-	-	-									
44DR024	72,181	-	14.76	-	-	-	-	-	-	-	-	-	72,181	-	14.76	-	-	-									
44DR028	37,554	-	7.03	-	-	-	-	-	-	-	-	-	37,554	-	7.03	-	-	-									
44DR006	41,939	-	12.58	-	-	-	-	-	-	-	-	-	41,939	-	12.58	-	-	-									
44DR022	37,297	-	11.95	-	-	-	-	-	-	-	-	-	12,132	-	3.89	25,164	-	8.06									
44DR025	54,909	-	14.80	-	-	-	-	-	-	-	-	-	-	-	-	54,909	-	14.80									
44DR007	11,781	-	2.69	-	-	-	-	-	-	-	-	-	-	-	-	11,781	-	2.69									
44DR001	45,395	-	11.88	-	-	-	-	-	-	-	-	-	-	-	-	45,395	-	11.88									
44DR030	6,841	-	1.09	-	-	-	-	-	-	-	-	-	-	-	-	6,841	-	1.09									
44DR009	7,585	-	1.44	-	-	-	-	-	-	-	-	-	-	-	-	7,585	-	1.44									
44DR002	23,039	-	4.20	-	-	-	-	-	-	-	-	-	-	-	-	23,039	-	4.20									
44DR026	18,814	-	4.06	-	-	-	-	-	-	-	-	-	-	-	-	18,814	-	4.06									
44DR005	11,094	-	2.67	-	-	-	-	-	-	-	-	-	-	-	-	11,094	-	2.67									
44DR011	42,460	-	12.38	-	-	-	-	-	-	-	-	-	-	-	-	42,460	-	12.38									

44DR018	10,505	-	2.27	-	-	-	-	-	-	-	-	-	-	-	10,505	-	2.27
44DR021	20,790	-	5.03	-	-	-	-	-	-	-	-	-	-	-	5,936	-	1.44
44DR031	13,809	-	2.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR023	7,423	-	2.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR012	22,657	-	3.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR019	102,024	-	17.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR029	15,958	-	2.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR015	75,833	-	12.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR013	64,105	-	7.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR027	16,904	-	3.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR010	59,548	-	14.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR016	35,590	-	6.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR003	76,460	-	14.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR032	15,366	-	2.82	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR004	37,310	-	5.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total improvement			-	-	-	24,020	-	7.23	93,656	-	24.34	183,830	-	43.26	263,523	-	66.98
Construction	Cost	GR	-	GR	-	GR	-	GR	-	GR	-	GR	-	GR	-	GR	-
44DR002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

44DR021	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR022	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR023	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR024	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR025	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR026	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR027	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR028	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR029	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR030	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR031	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR032	-	-	-	-	-	-	-	-	-	-	-	-	-
44DR001	372	0.06	-	-	-	-	-	-	-	-	-	-	-
Total new construction		-	-	-	-	-	-	-	-	-	-	-	-
Remaining budget		-	-	-	-	-	-	-	-	-	-	-	-

6.3 DTMP OUTPUTS

Based on the investment plan presented above, all DRCN roads will be conserved for the duration of the DTMP period. A further 142 km will be improved to gravel standard. All of these roads will also receive the cross drainage and protective structures required to make them maintainable all-weather roads. The remaining 99 km of earthen roads at the end of the DTMP period will be improved in the next DTMP. The same goes for the new construction which will take place by DOR fund, as it is being regularly funded by DOR every year.

Table 6.3.1 DTMP Output

Conservation	Improvement gravel	Improvement blacktop	New construction
291.32	141.81	-	-

Of the total DTMP budget, NPR 491 million will be spent on conservation and NPR 566 million on improvement. This will use up the entire DTMP budget for the five-year period.

6.4 DTMP OUTCOME

As a result of the activities planned in this DTMP, the percentage of all-weather maintainable DRCN roads increases by 49% from 51 km to 192km, with 34% (99km) remaining fair weather.

Table 6.4.1 Standard of DRCN Roads

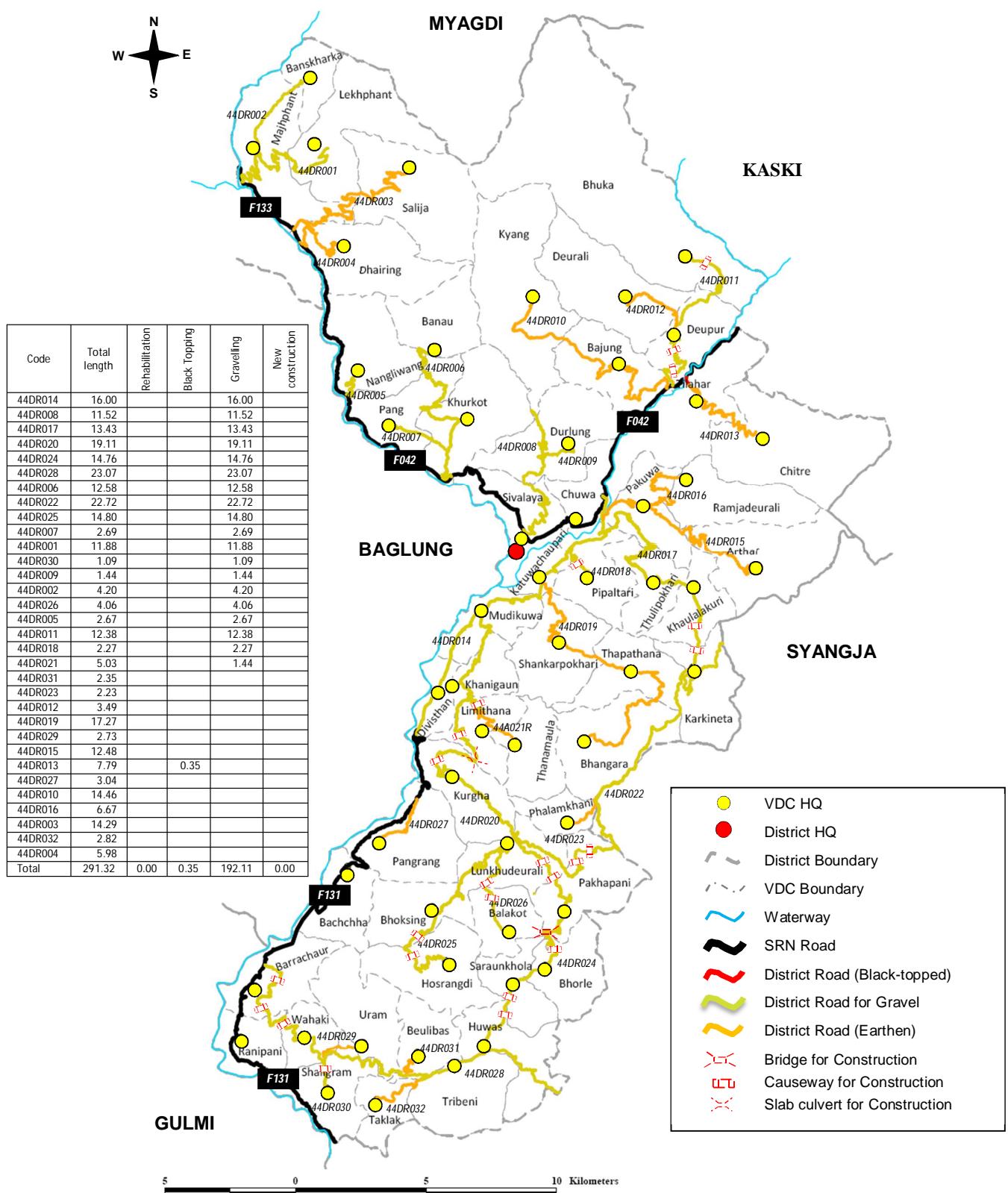
	Total length	Fair-weather		All-weather gravel		All-weather blacktop	
	km	km	%	km	%	km	%
Start of DTMP	291.32	240.66	83	50.31	17	0.35	-
End of DTMP	291.32	98.85	34	192.11	66	0.35	-
Difference	0.00	-141.81	-49	141.81	49	0.00	-

The number of VDC headquarters with access to the SRN or all-weather DRCN roads will increase from 25 to 41 and the district population with access to the SRN or all-weather DRCN roads will increase from 59% to 80%. The number of VDC headquarters with no access to DRCN roads will remain at 0, while the percentage of the district population with no access to DRCN roads will remain at 0%.

Table 6.4.2 Population with Access to Road Network

	Direct access to SRN			No access to road			Fair-weather core roads			All-weather core roads		
	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%
Start of DTMP	19	70,842	49%	0	-	0%	30	59,803	41%	25	85,864	59%
End of DTMP	19	70,842	49%	0	-	0%	14	29,024	20%	41	116,643	80%
Difference	-	-	0%	-	-	0%	-16	-30,779	-21%	16	30,779	21%

Figure 6 District Transport Master Plan (DTMP) Map of Parbat



Annex 1 **Traffic Data**

Code	Total Length (km)	Motorcycle	Car-Jeep- Minibus	Tractor	Truck-Bus	PCU	VPD
44DR001	11.88	4	3	5	-	15	8
44DR002	4.20	4	4	7	-	20	11
44DR003	14.29	8	5	7	-	23	12
44DR004	5.98	2	2	3	-	9	5
44DR005	2.67	3	3	7	-	19	10
44DR006	12.58	6	5	12	-	32	17
44DR007	2.69	4	4	4	-	14	8
44DR008	11.52	7	6	4	1	22	11
44DR009	1.44	2	2	1	-	5	3
44DR010	14.46	5	3	5	-	16	8
44DR011	12.38	4	2	4	-	12	6
44DR012	3.49	2	2	2	-	7	4
44DR013	7.79	4	2	1.5	1	11	5
44DR014	16.00	20	5	12	10	79	27
44DR015	12.48	5	2	2	1	13	5
44DR016	6.67	2	1	1	-	4	2
44DR017	13.43	5	3	7	5	40	15
44DR018	2.27	2	1	2	-	6	3
44DR019	17.27	5	2.0	3	1	15	6
44DR020	19.11	8	3.0	6	1	23	10
44DR021	5.03	4	2.0	3	-	10	5
44DR022	22.72	9	4.0	12	3	45	19
44DR023	2.23	2	1.0	2	-	6	3
44DR024	14.76	6	3.0	5	1	20	9
44DR025	14.80	4	2.0	4	1	16	7
44DR026	4.06	3	2.0	5	-	14	7
44DR027	3.04	2	1.0	2	-	6	3
44DR028	23.07	10	5.0	8	6	50	19
44DR029	2.73	2	1.0	1	-	4	2
44DR030	1.09	2	1.0	2	-	6	3
44DR031	2.35	5	2.0	6	-	17	8
44DR032	2.82	2	1.0	2	-	6	3
Total	291.32	-	-	-	-	-	-

Annex 2 **Population Served**

S. N.	VDC/ municipality	Population	Road																																						SRN
1	Majhphant	8,087	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
2	Banskharka	916	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
3	Lekhphant	2,526	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4	Salija	2,260	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
5	Dhairing	3,456	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
6	Nanglibang	2,751	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
7	Banau	1,458	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
8	Pang	4,566	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
9	Khurkot	3,950	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
10	Siwalaya	12,470	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
11	Durlung	3,024	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
12	Kyang	1,958	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
13	Bajung	4,228	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
14	Bhuka	2,312	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
15	Deupur	2,796	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
16	Deurali	1,857	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
17	Tilahar	4,614	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
18	Chitre	1,740	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
19	Chuwa	1,759	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
20	Pakuwa	2,196	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
21	Katuwachaupari	2,047	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
22	Pipaltari	2,407	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
23	Mudikuwa	1,869	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
24	Devisthan	3,004	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X			
25	Arthar	2,618	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
26	Ramja	1,779	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
27	Thulipokhari	2,431	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
28	Khulaalakuri	2,132	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
29	Karkineta	1,808	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
30	Shankarpokhari	3,863	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
31	Thapathana	2,969	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
32	Bhangara	1,863	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
33	Khanigoan	1,925	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
34	Limithana	1,497	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
35	Kurgha	2,926	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
36	Lunkhu	2,068	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

Source: Nepal National Census, 2068

Annex 3 Overall Road Inventory

Road code	Road Name	Length (km)	Start chainage (km) or X,Y-coordinate (degree)	End chainage (km) or X,Y-coordinate (degree)	Surface Type: Black Top	Surface Type : Gravel	Surface Type : Earth	All Weather	Fair Weather	Condition - Good/Fair	Condition - Poor	Condition - Temporarily Impassable	Condition - Permanently Impassable
44DR001	Wariben-Manjhphant-Lekhphant (Annechaur)	11.88	83.57,28.34	83.61,28.35			11.88	0.00	11.88	4.63	4.75	2.50	
44DR002	Mallaj (Kotghar)-Banskarka (Upallo) VDC Office	4.20	83.58,28.35	83.6,28.38			4.20	0.00	4.20	3.00	1.20		
44DR003	Millanchowk-Ramatama/Bhotedanda-Salija VDC Office	14.29	83.59,28.33	83.64,28.35			14.29	0.00	14.29	11.43	2.86		
44DR004	Milanchowk-Salyan-Ghakhet	5.98	83.59,28.32	83.61,28.32			5.98	0.00	5.98	3.59	2.39		
44DR005	Khaniyaghat-Nanglibang (VDC Office)	2.67	83.61,28.27	83.62,28.28			2.67	0.00	2.67	2.67			
44DR006	Armadi-Bhatebari-Banau Bazaar	12.58	83.65,28.24	83.65,28.28			12.58	0.00	12.58	10.06	2.52		
44DR007	Bagaicha-Badahare (VDC Office)	2.69	83.65,28.25	83.63,28.26			2.69	0.00	2.69	2.69			
44DR008	Kushma-Halhale School	11.52	83.68,28.22	83.68,28.26	7.50	4.02	7.50	4.02	11.52				
44DR009	Padamkholsi-Sarunchaur (VDC Office)	1.44	83.69,28.25	83.70,28.25			1.44	0.00	1.44	1.44			
44DR010	Patichaur-Bajung-Kyang (VDC Office)	14.46	83.74,28.27	83.68,28.30			14.46	0.00	14.46	11.57	2.89		
44DR011	Patichaur-Maidan-Labsibot (VDC Office)	12.38	83.74,28.27	83.75,28.32			12.38	0.00	12.38	11.14	1.24		
44DR012	Maidan (Depur)-Purnagoan (VDC Office)	3.49	83.74,28.29	83.72,28.30			3.49	0.00	3.49	2.80	0.70		
44DR013	Dimuwa-Darak-Chitre (VDC Office)	7.79	83.75,28.27	83.77,28.26	0.35		7.44	0.35	7.44	6.23	1.56		
44DR014	Dovilla-Cyclechowk-Phalebas Dhika	16.00	83.71,28.23	83.64,28.15	16.00	0.00	16.00	0.00	16.00				
44DR015	Dovilla Bridge-Pakuwa-Gangate-Arthar	12.48	83.71,28.23	83.77,28.21			12.48	0.00	12.48	11.23	1.25		
44DR016	Pakuwa-Chhapa-Ramjathanti	6.67	83.73,28.23	83.75,28.24			6.67	0.00	6.67	4.67	2.00		
44DR017	Silmi-Thulipokhari-Karkineta	13.43	83.71,28.22	83.75,28.17			13.43	0.00	13.43	13.43			
44DR018	Thausekhola-Bitlab-Pipaltari (VDC Office)	2.27	83.70,28.21	83.71,28.21			2.27	0.00	2.27	2.27			
44DR019	Cyclechowk-Chuchundearali-Thapathan-Bhangara (VDC Office)	17.27	83.69,28.20	83.71,28.15			17.27	0.00	17.27	12.95	4.32		
44DR020	Mudikuwa-Jhaklak-Kurgha-Lunkhu	19.11	83.67,28.19	83.68,28.12			19.11	0.00	19.11	18.16	0.96		
44DR021	Lamayakhola-Limithana-Thanamaula VDC Office	5.03	83.66,28.16	83.68,28.15			5.03	0.00	5.03	5.03			
44DR022	Hilekhola-Karkineta-Lunkhu	22.72	83.76,28.18	83.68,28.12	10.77	11.95	10.77	11.95	18.17	4.54			
44DR023	Phalamkhani (Dandakateri)-Ghante	2.23	83.70,28.12	83.71,28.13			2.23	0.00	2.23	2.23			
44DR024	Lunkhu-Jyamire-Huwas	14.76	83.68,28.12	83.67,28.04			14.76	0.00	14.76	12.55	2.21		
44DR025	Lunkhu-Payubhanjyang-Hosrangdi VDC Office	14.80	83.68,28.12	83.65,28.07			14.80	0.00	14.80	13.32	1.48		
44DR026	Lunkhu-Balakot (Daha)	4.06	83.67,28.11	83.67,28.08			4.06	0.00	4.06	4.06			
44DR027	Sirkang (Lokmarg)-Pangrang VDC Office	3.04	83.64,28.13	83.63,28.11			3.04	0.00	3.04	2.43	0.61		
44DR028	Chisapani-Huwa-Wahakibhanjyang-Barrachaur (Lokmarg)	23.07	83.70,28.03	83.58,28.07	16.04	7.03	16.04	7.03	22.49	0.58			
44DR029	Urampokhara-Wahakibhajyang	2.73	83.62,28.04	83.61,28.04			2.73	0.00	2.73	2.73			
44DR030	Wahakibhajyang-Salgram VDC Office	1.09	83.60,28.04	83.61,28.03			1.09	0.00	1.09	0.87	0.22		
44DR031	Duda-Maidan (Beulibas)	2.35	83.64,28.03	83.64,28.04			2.35	0.00	2.35	2.12	0.24		
44DR032	Arnas (Arthung)-Taklak VDC Office	2.82	83.64,28.04	83.63,28.03			2.82	0.00	2.82	2.26	0.56		
44VR001	Annechaur-Okhreni	2.12	0+000	2+124			2.12	0.00	2.12	2.12			
44VR002	Annechaur-Kuwapani	3.00	0+000	3+000			3.00	0.00	3.00	2.00	1.00		

Road code	Road Name	Length (km)	Start chainage (km) or X,Y-coordinate (degree)	End chainage (km) or X,Y-coordinate (degree)	Surface Type: Black Top	Surface Type : Gravel	Surface Type : Earth	All Weather	Fair Weather	Condition - Good/ Fair	Condition - Poor	Condition - Temporarily Impassable	Condition - Permanently Impassable
44VR003	Milanchowk-Kotghar-Banskharka (Tallo)	14.10	0+000	14+100					14.10	12.69	1.41		
44VR004	Salija (Dahidanda)-Phalamedanda-Nagi	10.21	0+000	10+211					10.21	9.19	1.02		
44VR005	Nanglibang (VDC office)-Banau	4.69	0+000	4+689					4.69	0.00	4.69	3.28	1.41
44VR006	Banau-Deurali	7.32	0+000	7+320					7.32	0.00	7.32	6.22	1.10
44VR007	Chhamarke-Khurkot (Bhumikothan)	7.27	0+000	7+273					7.27	0.00	7.27	6.91	0.36
44VR008	Badahare (VDC office)-Damuwakhola	3.48	0+000	3+477					3.48	0.00	3.48	3.48	
44VR009	Halhale School-Lespar-Salija (Dahidanda)	18.95	0+000	18+953					18.95	0.00	18.95	14.21	4.74
44VR010	Sarunchaur (VDC office)-Bajung	4.84	0+000	4+841					4.84	0.00	4.84	4.36	0.48
44VR011	Paticaur-Timure-Kyang	5.76	0+000	5+760					5.76	0.00	5.76	3.17	0.83
44VR012	Labsibot (VDC office)-Jhillibarang	7.29	0+000	7+292					7.29	0.00	7.29	5.83	1.46
44VR013	Purnagoan (VDC office)-Ghurunga	4.69	0+000	4+694					4.69	0.00	4.69	3.99	0.70
44VR014	Damside-Makha (Deupur)	6.74	0+000	6+740	0.65				6.09	0.65	6.09	5.39	1.35
44VR015	Tilahar-Gijyan-Dovilla (Rajmarg)	8.87	0+000	8+867					8.87	0.00	8.87	5.32	1.55
44VR016	Ratikhola-Lamsalthar-Chitre	5.56	0+000	5+562					5.56	0.00	5.56	3.34	2.22
44VR017	Arthur-Tunikhola	4.69	0+000	4+687					4.69	0.00	4.69	2.81	1.87
44VR018	Pakuwa-Ramja-Healthpost (Arthur)	12.00	0+000	6+000					12.00	0.00	12.00	12.00	
44VR019	Bitlab-Tamadi-Thulipokhari	5.69	0+000	5+690					5.69	0.00	5.69	5.69	
44VR020	Pipaltari-Gahatepokhara-Salghar-Melpokhari	8.11	0+000	8+110					8.11	0.00	8.11	6.49	1.62
44VR021	Thulipokhari-Rohote-Andherineta	5.98	0+000	5+982					5.98	0.00	5.98	5.98	
44VR022	Bhangara-Beteni	1.68	0+000	1+684					1.68	0.00	1.68	1.01	0.67
44VR023	Kusma-Modibeni	4.00	0+000	2+000					4.00	0.00	4.00	3.20	0.80
44VR024	Cyclechwok-Gahatepokhara-Thulipokhari	7.94	0+000	7+937					7.94	0.00	7.94	7.14	0.79
44VR025	Mudhekholia (Rahale)-Lamayakhola	2.30	0+000	2+302					2.30	0.00	2.30	2.30	
44VR026	Thanamaula-Phalamkhani	8.84	0+000	8+844					8.84	0.00	8.84	8.76	0.09
44VR027	Jhaklak-Chitipani-Chuchundearali	5.30	0+000	5+300					5.30	0.00	5.30	5.30	
44VR028	Phalebas-Thapathana-Karkineta	14.21	0+000	14+210					14.21	0.00	14.21	14.21	
44VR029	Balakot-Sitle-Sadhane-Huwas	6.15	0+000	6+151					6.15	0.00	6.15	3.08	3.08
44VR030	Payubhanjyang-Urapokhara	6.55	0+000	6+545					6.55	0.00	6.55	5.24	1.31
44VR031	Dangreodar-Saldanda-Kholakharka	2.89	0+000	2+890					2.89	0.00	2.89	1.73	1.16
44VR032	Sarau-Hile-Jyamire	6.04	0+000	6+043					6.04	0.00	6.04	2.42	3.63
44VR033	Deurali (Saligram VDC office)-Mithlang	3.29	0+000	3+288					3.29	0.00	3.29	3.12	0.16
44VR034	Chhachanne-Charkang-Setibeni-Golang	8.00	0+000	8+000					8.00	0.00	8.00	7.00	
44VR035	Dumreghanjyang-Banidanda-Bhutrelthok-Tribeni	5.20	0+000	5+200					5.20	0.00	5.20	3.80	0.20
44VR036	Ratikhola-Chhapa	6.594	0+000	6+594					6.594	0.00	6.594	3.297	3.297
44VR037	Ramjathanti-Chitre-Eklechuar	9.12	0+000	9+120					9.12	0.00	9.12	2.28	2.28
Total		540.80	0.00	0.00	1.00	50.31	489.49	51.31	489.49	445.38	82.39	5.98	7.04

ગ્રાજ મિનિટ ૨૦૬૯ ખાત માથ ૧૮ ગેતોલા દિન ડિલ્લા વિકાર-
દાખિલોણ, એપ્રિલ ૨૪ ઇંડાસ્ટ્રિયાલ રિપોર્ટ અને ઉપાયીની તોતા નિર્દિષ્ટ લાયકીમાં કિસ્સા
ભાવિત કરી શકી ઉંમેળવાનું કે. લી. કોંગાની લાયકી ઉપાયી-
તોતા વર્ત્તો । —

उत्तराखण्ड

१. श्री बोगवाराहुर के. श्री. रित्या. वि.डी. (पु. जिरला डॉक्टरिन्स)

२. श्री बैक्सप्रेष्ट जोशी - इंद्र लालनीय लगावट (कैंस. - रोपाली थार्मोज)

३. श्री वृषभ वर्मारुड विं.व्ह. - डॉ. ए.ए. पा. (माझेवाराप) पर्वत

४. श्री अवैष्णव हारुडवर्ग डॉ. व्ह. द्वारा गंगापाली समाप्ति

५. श्री दिपक आचार्य - डॉ. रेखा. (माझेवाराप) पर्वत

६. श्री गोपा लिवार्डी नेपाली लगावट म.व.प. व्ह.

७. श्री राम केडल नेकपा (रामाल)

८. श्री छाक्कराम गांतम

९. श्री चौटल (बुद्ध) ने. ओ.पा. माझेवाराप

१०. श्री इरेवर चिरी राष्ट्रपा.

११. श्री प्रकाश चौटल रा.प्र.पा. नेपाल

१२. श्री विद्यादुर्ग कुमारी कुमारी विं.व्ह.पा. नेपाल

१३. श्री दुर्गा गुह्य लै.कृष्णा-माझेवाराप

१४. श्री राजेन्द्र पेट्रिन तैका (याकीकूरा) पर्वत

१५. श्री लालाराम दुष्कृष्ण सामाजिक वैज्ञानिक विं.व्ह.पा.

१६. श्री नितिया लग्नाल - नेकपा रामाल

श्री राम उपास्योगी

१. श्री विवात विं.व्ह.पा. - Asset manager RTI-SWAP

२. श्री युक्त शास्त्री लग्नाल - व.वा.प. -

३. श्री घटपाली पौडेल - ले.वा. -

४. श्री देवताराम दुष्कृष्ण - विं.व्ह.पा.

पात्रिका एवं निष्ठापन !

पुरुषों द्वारा लिखित है।

प्रि. १. - किंतु २०८९ अक्टूबर की जाकिली की लंबाई पर्टिकल निः
नम गई है ताकि उन्हें DRCN सट्टकान्दों लानी
लियनाबुसर बल्लारीविवरणों आदाना तयार करिए का नाम तथा
दूसरी (conservation & improvement) की Ranking तभी नपश्चिल
क्षेत्रसरका का. ०४६/६० दाता ०६७/६८ समको लगाता, इसीपरे
सिवता प्रत्यापन उद्देश्यका लिए है।

~~Dr. S. K. Jha~~ (6/11/2005) Ranking of Conservation Works (NPR '000)

Code	Total length (km)	1. Emergency	2. Routine	3. Recurrent (paved)	4. Recurrent (gravel)	5. Recurrent (earth)	6. Periodic (blacktop)	7. Periodic (gravel)	Total cost (NPR '000)	Population served	Cost/person (NPR)
44A017R	13.43	403	269	-	-	3,358	-	-	4,030	44,773	90
44A030R	1.09	33	22	-	-	272	-	-	327	2,681	122
44A014R	16.00	480	320	-	6,400	-	-	4,000	11,200	80,698	139
44A020R	19.11	573	382	-	-	4,778	-	-	5,733	41,010	140
44A002R	4.20	126	84	-	-	1,051	-	-	1,261	9,003	140
44A009R	1.44	43	29	-	-	360	-	-	432	3,024	143
44A024R	14.76	443	295	-	-	3,691	-	-	4,429	26,654	166
44A007R	2.69	81	54	-	-	672	-	-	806	4,566	177
44A026R	4.06	122	81	-	-	1,015	-	-	1,218	5,524	221
44A012R	3.49	105	70	-	-	874	-	-	1,048	4,653	225
44A025R	14.80	444	296	-	-	3,701	-	-	4,441	19,009	234
44A006R	12.58	377	252	-	-	3,144	-	-	3,773	14,985	252
44A031R	2.35	71	47	-	-	588	-	-	706	2,757	256
44A001R	11.88	356	238	-	-	2,969	-	-	3,563	13,789	258
44A018R	2.27	68	45	-	-	567	-	-	680	2,407	283
44A005R	2.67	80	53	-	-	668	-	-	801	2,751	291
44A029R	2.73	82	55	-	-	682	-	-	819	2,415	339
44A008R	11.52	346	230	-	3,000	1,006	-	1,875	6,457	17,452	370
44A013R	7.79	234	156	175	-	1,861	-	-	2,425	6,354	382
44A021R	5.03	151	101	-	-	1,258	-	-	1,510	3,833	394
44A019R	17.27	518	345	-	-	4,318	-	-	5,181	13,149	394
44A027R	3.04	91	61	-	-	760	-	-	911	2,223	410
44A016R	6.67	200	133	-	-	1,667	-	-	2,000	4,814	416
44A015R	12.48	374	250	-	-	3,120	-	-	3,744	8,333	449
44A004R	5.98	179	120	-	-	1,495	-	-	1,794	3,456	519
44A011R	12.38	371	248	-	-	3,096	-	-	3,715	6,965	533
44A028R	23.07	692	461	-	6,416	1,757	-	4,010	13,337	22,612	590
44A032R	2.82	85	56	-	-	705	-	-	846	1,424	594
44A010R	14.46	434	289	-	-	3,615	-	-	4,337	6,186	701
44A023R	2.23	67	45	-	-	558	-	-	670	917	731
44A003R	14.29	429	286	-	-	3,573	-	-	4,287	4,786	896
44A022R	22.72	682	454	-	4,306	2,988	-	2,691	11,121	10,782	1,031

Ranking of Improvement Works (NPR '000)

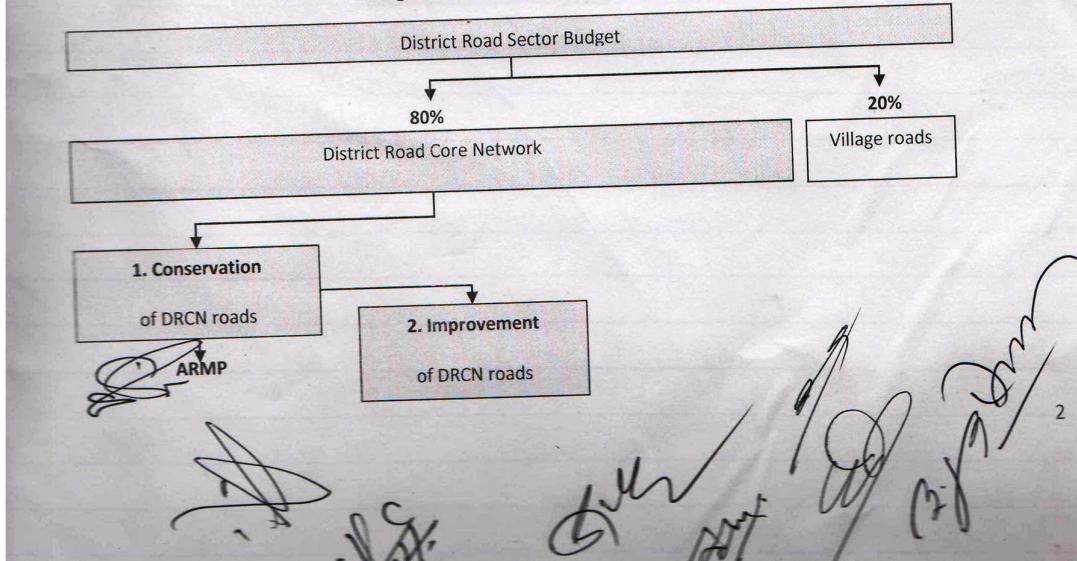
Code	Total length (km)	Gravelling (km)	Blacktopping (km)	Total cost (NPR '000)	Population served	Cost/person (NPR)
44A014R	16.00	-	-	-	80,698	-
44A008R	11.52	4.02	-	12,373	17,452	709
44A017R	13.43	13.43	-	78,833	44,773	1,761
44A020R	19.11	19.11	-	156,494	41,010	3,816
44A024R	14.76	14.76	-	112,181	26,654	4,209
44A028R	23.07	7.03	-	97,554	22,612	4,314
44A006R	12.58	12.58	-	71,939	14,985	4,801
44A022R	22.72	11.95	-	53,297	10,782	4,943
44A025R	14.80	14.80	-	94,909	19,009	4,993
44A007R	2.69	2.69	-	23,781	4,566	5,208
44A001R	11.88	11.88	-	85,395	13,789	6,193

Code	Total length (km)	Gravelling (km)	Blacktopping (km)	Total cost (NPR '000)	Population served	Cost/person (NPR)
44A030R	1.09	1.09	-	16,841	2,681	6,282
44A009R	1.44	1.44	-	19,585	3,024	6,477
44A002R	4.20	4.20	-	63,039	9,003	7,002
44A026R	4.06	4.06	-	38,814	5,524	7,026
44A005R	2.67	2.67	-	21,094	2,751	7,668
44A011R	12.38	12.38	-	62,460	6,965	8,968
44A018R	2.27	2.27	-	22,505	2,407	9,350
44A021R	5.03	5.03	-	40,790	3,833	10,642
44A031R	2.35	2.35	-	33,809	2,757	12,263
44A023R	2.23	2.23	-	11,423	917	12,456
44A012R	3.49	3.49	-	62,657	4,653	13,466
44A019R	17.27	17.27	-	182,024	13,149	13,843
44A029R	2.73	2.73	-	35,958	2,415	14,889
44A015R	12.48	12.48	-	125,833	8,333	15,101
44A013R	7.79	7.44	-	104,105	6,354	16,384
44A027R	3.04	3.04	-	36,904	2,223	16,601
44A010R	14.46	14.46	-	109,548	6,186	17,709
44A016R	6.67	6.67	-	95,590	4,814	19,857
44A003R	14.29	14.29	-	116,460	4,786	24,334
44A032R	2.82	2.82	-	35,366	1,424	24,836
44A004R	5.98	5.98	-	87,310	3,456	25,263

Estimated Funding Levels (Roads) for Next Five Years (in NPR '000)

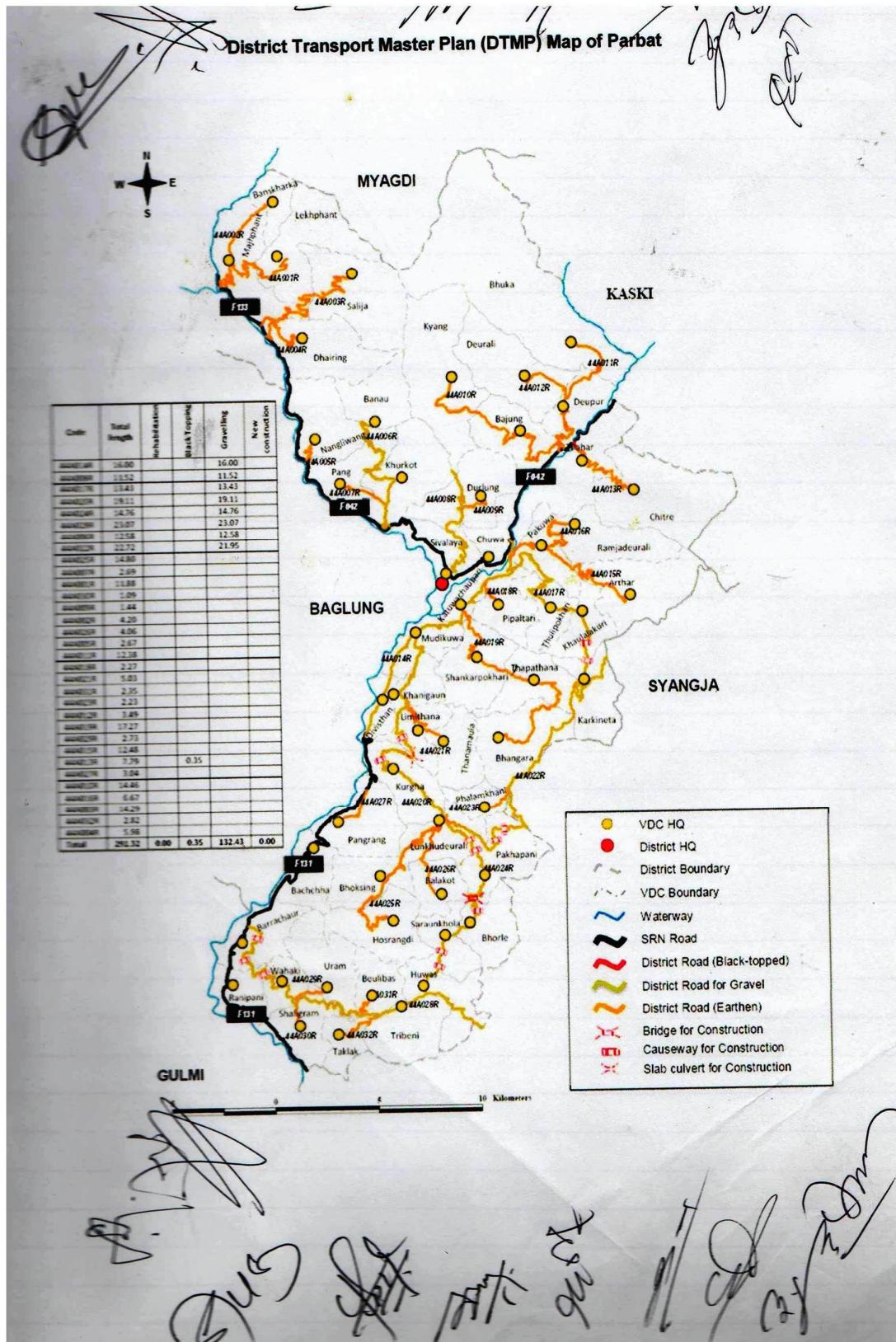
Funding source	069/70	070/71	071/72	072/73	073/74
RTI SWAp Regular and Additional	25,529	79,200	95,040	114,048	136,858
Road Board Nepal	2,400	2,640	2,904	3,194	3,514
DDC Internal Fund & MLD Grant	3,153	10,920	19,312	34,243	55,668
DFID additional Grant	12,554	0	0	0	0
Other donors	0	30,000	100,000	150,000	200,000
RTI SWAp –Bridge component	0	7,000	17,000	30,000	80,000
People Participation (20%)	17,120	18,832	20,715	22,787	25,065
Total	60,756	148,592	254,971	354,272	501,104
Grand total			1,319,696		

Figure 5 District Road Sector Budget Allocation



Investment Plan

Item	Year											
	2069/70		2070/71		2071/72		2072/73		2073/74			
Fiscal year												
Total budget		60756.00		148592.00		254971.00		354272.00		501104.00		
Village roads		12151.00		29718.00		50994.00		70854.00		100221.00		
Core road network budget (DTMP)		48605.00		118874.00		203977.00		283418.00		400883.00		
Core network length (km)		291.32		291.32		291.32		291.32		291.32		
Blacktop (km)		0.35		0.35		0.35		0.35		0.35		
Gravel (km)		50.31		50.31		56.31		71.05		94.23		
Earthen (km)		240.66		240.66		234.65		219.91		196.73		
Conservation (NRs)		48605.00		94853.00		109833.00		97966.00		125000.00		
Emergency		8740.00		8740.00		8740.00		8740.00		8740.00		
Routine		5826.00		5826.00		5826.00		5826.00		5826.00		
Recurrent (blacktop)				20122.00		22525.00		28422.00		37693.00		
Recurrent (gravel)				34039.00		60166.00		58663.00		54978.00		
Recurrent (earthen)				-								
Periodic (blacktop)							14078.00					
Periodic (gravel)										23558.00		
Improvement	Cost	BT	GR	0.00	BT	GR	24020.00	BT	GR	94144.00	BT	GR
44A014R							12373.00		4.02			
44A008R	12373.00		4.02				12373.00		4.02			
44A017R	78833.00		13.43				11647.00		1.98	67185.00		11.45
44A020R	156494.00		19.11							26959.00		3.29
44A024R	112181.00		14.76								129535.00	
44A028R	97554.00		7.03								55917.00	
44A006R	1939.00		12.58									15.82
44A022R	53297.00		11.95									7.36
Total improvement					24020.00		6.01	94144.00		14.74	185452.00	
											23.18	275883.00
												- 38.25



अज्ञ मिति २०६९ फ्राल गाडी गते दिन जिल्ला घार
मार गुण्योजना (PAMP) पुनरावलोकन तथा संस्कोषणकालागि
जिल्ला एड कोट नेटवर्क (DR-CN) द्वारा गर्ने लागि स्थानीय-
विधाय अधिकारी श्री गुणपुष्टार्द लखालाङ्को अध्यक्षामा दूजो तिहाई
दलका प्रमुख छहित खोकारवाला द्वारा को देशभक्ति उपस्थिति
मेंठल वल्यो ।

उपस्थिति

१. श्री गुणपुष्टार्द लखाला - व्या.वि.भी.

२. श्री रोज उगाधीकारी - देवेजड एनेक्स नाइवाडी

३. श्री लालकार्जी गुण्डा - नेपाली कांग्रेस

४. श्री विकास लखाला - नेकपा गाले

५. श्री तेजेश पोडले - नेकपा लक्ष्मी

६. श्री रिम पसारु भुसाल नेपाली कांग्रेस

७. श्री राज भट्टराम अध्यक्ष रेक्या (लाली)

८. श्री चम विश्वकर्मा र. न. न. का (गुलापाटी)

९. श्री कुमार वहारु विश्व नेपाली कांग्रेस

१०. श्री प्रकाश पाँडले - यापुपा नेपाल

११. १००० गुरुदा - न. क. प. - न. आ. १०५

१२. श्री पाँडल नेपाल (एनेक्स)

१३. १५०० वहारु नेपाल (एनेक्स)

१४. श्री बाल चौडेल हिन्दू अन्तर्राष्ट्रीय नेक्या (सम्पर्क)

१५. श्री वहारु के. सी. (क. क. प. लाल)

१६. श्री कुमारी पाँडिया (जन शुल्कपारी)

१७. श्री कुमारी गुरुदा (गाली)

१८. श्री रमेश प्रसाद रत्नाली गोपाल रामानुज

१९. श्री रमेश प्रसाद रत्नाली गोपाल रामानुज

२०. श्री रमेश प्रसाद रत्नाली गोपाल रामानुज

२१. श्री रमेश प्रसाद रत्नाली गोपाल रामानुज

२२. श्री रमेश प्रसाद रत्नाली गोपाल रामानुज

२३. श्री रमेश प्रसाद रत्नाली गोपाल रामानुज

RTI SWAP DAME

देवी रामी अविलम्ब पर्याप्त

RTI SWAP SAME -

कृष्ण देव के रथपाठि कृ.प्रा.युक्तिवाच

पुकारी लखल न-गो-प. निरन्तर.

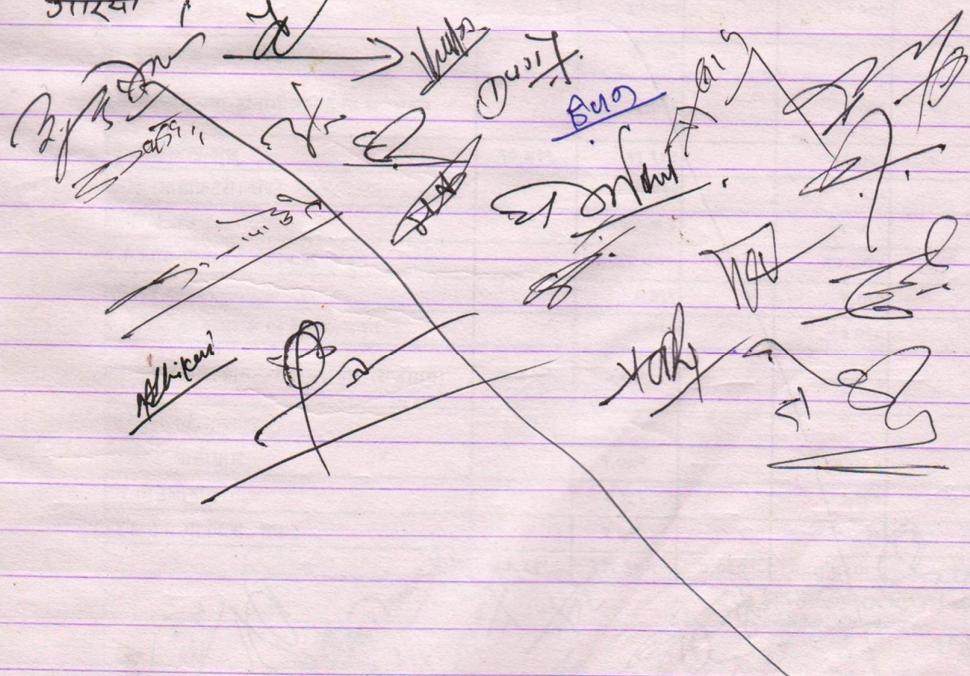
देवी रामी अविलम्बि शा-ता-हुंपु रेतालम्पुलिम्पु

लिलाधा युवदी कायेकारी साचिद एं शीर्ष शास्त्रहेत

कृष्ण नवाहराम् शे-क-आ. (जि.वि.द.पर्याप्त)

२०१७ दिसेंबर कार्यक्रम - गो-पा.

ग्रिंटी १.७. ३८८/६८ मा झिल्ला छात्रवाद पार्टी ने दावेको झिल्ला चातायात गुणमान (DTMP) खातावलो कराउँ लाई। झिल्ला दृष्टक कोरेनेटर्क (DR-CN) मा प्रत्येक गाविसको केन्द्रलाई अपहुँच पुग्न आवासमा कुथापिक्ता दिई तल उल्लेखीय पूर्णी र नवशर्गा अनुदारण, सडकसंरचना इवंभाग हड्क (All-weather Road) बनाउनी तर्फ पुथापिक्ता दिनै जारी स्थाविको झिल्ला चातायात गुणमान (DTMP) सोबोधन गर्ने लिएप गरिए।



जिल्ला यातायात गुरुयोजना संशोधनका लागि पर्वत जिल्लाको लागि प्रस्तावित जिल्ला कोर सडक संजाल र नसमेटिएका

सि. न.	जिल्ला सडक कोर संजालको नाम	ग्रभाल ल. (कि.मी.)	माटे ल. (कि.मी.)	नयाँ ल. (कि.मी.)	जम्मा ल. (कि.मी.)	कैफियत
१	वारीबेनी-माङ्फाट-लेखफाट (अन्नेचौर)		११.८७५	०.०६०	११.९३५	
२	मल्लाज-बांसखर्क (उपल्लो) गा.वि.स. भवन		४.२०४		४.२०४	
३	मिलनचौक-रातामाटा/भोटेडाङ्गा-सालिजा (गा.वि.स. भवन)		१४.२९१		१४.२९१	
४	मिलनचौक-सल्यान-घासेत		५.९८०		५.९८०	
५	खनियाथाट-नाइलीबाड (गा.वि.स. भवन)		२.६७०		२.६७०	
६	अर्मादी-भटेवारी-बनौ बजार		१२.५७७		१२.५७७	
७	बरौंचा-बडहरे (गा.वि.स. भवन)		२.६८७		२.६८७	
८	कुशमा-हलहले विद्यालय	११.५२४			११.५२४	
९	पदमखोल्सी-सरौनचौर (गा.वि.स. भवन)		१.४४१		१.४४१	
१०	पातीचौर-बाजुङ्ड-क्याड (गा.वि.स. भवन)		१४.४५८		१४.४५८	
११	पातीचौर-मैदान-लव्हीबोट (गा.वि.स. भवन)		१२.३८२		१२.३८२	
१२	मैदान (देउपुर)-पूर्णागाउँ (गा.वि.स. भवन)		३.४९४		३.४९४	
१३	डिमुवा-चिव्रे (गा.वि.स. भवन)		७.७९३		७.७९३	
१४	दोबिल्ला-साईकलचौक-फलेवास ठिक	१६.१६८	०.०००		१६.१६८	
१५	दोबिल्ला पुल-पकुवा-गोगाटे-आर्थर		१२.४८१		१२.४८१	
१६	पकुवा-छापा-राम्जाठाटी		६.६६८		६.६६८	
१७	सिल्मी-दूलीपोखरी-कार्कीनेटा		१३.४३३		१३.४३३	
१८	थाउसेखोला-वितलवा-पिपलटारी (गा.वि.स. भवन)		२.२६८		२.२६८	
१९	साईकलचौक-चुचुन्देउराली-थापाठाना-भंगरा (गा.वि.स. भवन)		१७.२७०		१७.२७०	
२०	मुडीकुवा-भंकलक-कुद्धा-लुखु		१९.९९९		१९.९९९	
२१	लमायाखोला-लिमिठाना-ठानामौला गा.वि.स. भवन		५.०३२		५.०३२	
२२	हिलेखोला-कार्कीनेटा-लुखु	१०.८३९	११.९५३		२२.७९२	
२३	फलामखानी (डांडाकटेरी)-घण्टे		२.२३३		२.२३३	
२४	लुखु-ज्यामिरे-हुवास		१४.७६४		१४.७६४	
२५	लुखु-पथ्यमन्ज्याड-होसाइदी गा.वि.स. भवन		१४.८०४		१४.८०४	
२६	लुखु-बालाकोट (दह)		४.०६१		४.०६१	
२७	सिरकाड (राजमार्ग)-पाइराड गा.वि.स. भवन		३.०३८		३.०३८	
२८	चिसापानी-हुवास-वाहाकीभन्ज्याड-ब्राचौर (राजमार्ग)	१६.०००	७.०२९		२३.०२९	
२९	उरामपोखरा-वाहाकीभन्ज्याड		२.७२९			
३०	वाहाकीभन्ज्याड-सालीग्राम		१.०८९		१.०८९	
३१	डुङ्ग-मैदान (वेउलीबास)		२.३५२		२.३५२	
३२	अरनास-टकलाक गा.वि.स. भवन		२.८२१		२.८२१	
	जम्मा	५४.५३१	२३६.९८८	०.०६०	२८८.८५०	

Proposed DCRN of Parbat for proposed revised DT

MP

