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, **Palpa**

October, 2014

FINAL REPORT

VOLUME-I MAIN REPORT

Prepared by the North Star Engineering Consultant (P) Ltd for the District Development Committee (DDC) and District Technical Office (DTO), Palpa 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 through Rural Access Program (RAP 3)

FOREWORD

Government of Nepal
Ministry of Federal Affairs and Local Development
Office of District Development Committee
Palpa

FOREWORD

It is my great pleasure to introduce this revised District Transport Master Plan (DTMP) of **Palpa**, district which was concurred and approved by the joint meeting of different stakeholders, DRCC and DDC board held on 30 October 2014. Prior to this, DRCN was passed by the joint meeting of different stakeholders, DRCC and DDC board held on 2 April 2014. Based on the DTMP Guideline 2012, all together 38 District Road Core Network (DRCN) aiming to connect all Village Development Committee (VDC) headquarters with the district headquarter, either directly or through strategic road network (SRN) have been selected. By bringing the DRCN to a maintainable and all-weather standard, year-round access to all VDCs headquarters can be ensured.

I believe this document will be helpful to materialize Rural Transport Infrastructure Sector Wide Approach (RTI SWAp) through sustainable planning, resources mobilization, implementation and monitoring of the road development. The document is anticipated to generate substantial employment opportunities for rural people through conservation and improvement activities of the existing road network. DRCN plays an important role to strengthen and promote overall economic growth of the district through established and improved year round transport services reinforcing intra and inter-district linkages. It is most crucial to expand DRCN in a planned way as per the DTMP recommendations by considering the framework of available resources in DDC. This document is very essential in lobbying the donor agencies through central government to attract fund gap. Furthermore, this document will be supportive in avoiding prevailing duplication in resources allocation in road network development by considering basket fund approach.

I would firstly like to express my gratitude to Rural Access Program (RAP3) for financial and technical support. Secondly, my thanks goes to DTO Chief, Mr. Bhimarjun Pandey and other DDC/ DTO staff for their valuable efforts in the process of producing this document. Equally, I would like to thank Mr. Shrawan Kumar Thapa, Team Leader and other team members from North Star Engineering Consultant (P) Ltd. for their continuous dedication and hard-work in bringing this DTMP document to this stage. My special thank goes to all the representatives of political parties, who played crucial role in providing constructive feedbacks and valuable support in preparing this document successfully.

Last but not least, I would like to express my heartfelt gratitude to Department of Local Infrastructure Development and Agriculture Road (DoLIDAR), Local Transport Infrastructure Sectorwide Program for providing valuable suggestions and cooperation to produce this report. Any pioneering and constructive suggestions regarding this document will be highly appreciated.

.....
Krishna Prasad Pandey
Local Development Officer
DDC, Palpa

Local Development Officer

ACKNOWLEDGEMENTS

The District Transport Master Plan of Palpa District has beenprepared for Rural Access Programme (RAP3) under the Contract Agreement between RAP3 and North Star Engineering Consultant (P) Ltd. (Contract No: RTI Sector DTMP/001/2012 amendment no. 2) to carry out the task of preparing of DTMP of PalpaDistrict of Nepal. We would like to convey our indebtedness to RTI Sector Maintenance Pilot for entrusting us the responsibility to carry out the task of preparing of DTMP of PalpaDistrict.

We would like to express our sincere gratitude to the Project Coordinator Mr. Ganga Bahadur Basnet (SDE) of DoLIDAR, and Program Manager Mr. Michael Green, Deputy Program Manager Mr. Dilli Prakash Sitaula andCentral Asset Management Engineer Mr. Laxman Bhakta Dahi Shrestha of (RAP 3) whose valuable co-operation and suggestions guided us to accomplish the agreed task to this level. We would also like to express our sincere thanks to LDO of Palpa DDC, Mr.Krishna Prasad Pandey, Mr.Bhimarjun Pandey (SDE), Planning Officer, Program Officer, Information Officer, Engineers, Sub-engineers and other staffs of DDC and DTO Offices, Palpafor their extended help and regular support; and coordination at different levels while working at the field level.

The local leaders and local people from Palpa district are also thankful for their help and suggestion for the selection and identification of the DRCN. We hope, this prepared DTMP of PalpaDistrict will be very helpful and a valuable guideline for the planning and development of effective and systematic transport network in Palpa District.

Finally, we would like to thanks the DTMP team members for their valuable efforts to bring the study report in this stage.

Dhruba Raj Tripathi
Managing Director
North Star Engineering Consultant

EXECUTIVE SUMMARY

Palpa District is located in Lumbini Zone of the Western Development Region of Nepal. It borders with Nawalparasi district to the East, Arghakhanchi district to the West, Tanahu, Syangja and Gulmi districts to the North and Rupandehi and Nawalparasi districts to the South. Topographically, Palpa district entails 27°34' - 27°57' latitude and 83° 15' - 84°22' longitudes. Geopolitically, the district is administratively divided into three electoral constituencies 13 Illakas which consist of 65 VDCs and 1 municipality. Each VDC is divided into 9 Wards.

The total area of the district is 1373 sq km. Considering on land use pattern, 52.13% of area is covered by forest, 41.85% area covered by agricultural land, 5.12% pasture land and remaining 0.92% area covered by others. Elevation of District Headquarters of Palpa, Putalibazar is 850 m. Kaligandaki, Tinau, Ridi and Kusum are main rivers flowing in district.

Subsistence agriculture farming, mainly cash crop production is the main source of occupation and livelihood of the majority of the population, with 62.1% of the population active in this sector. Paddy, fruits and vegetables are the main agricultural production in this district for the domestic use and export to nearby districts. Due to the fertility of the plain land, mostly central and western part of the district are suitable for production of paddy and vegetables. Valleys like Rampur, Kachal, Madi, Darpuk and Arghali are fertile and famous for agricultural production.

The district inventory identified just over 1376 km of roads, including 158 km of strategic roads and 1218 km of rural roads. In coordination with the DTICC and DDC, 38 rural roads with a length of 427.88 km were identified as making up the district road core network (DRCN), and the remaining 789.81 km were classified as village roads. The existing DRCN roads link up 63 of the 66 VDCs/municipality headquarters. Mostly DRCN roads are earthen fair-weather roads and some are gravel and blacktop. 8.83 km road to be constructed for linking remaining three VDCs with SRN or district headquarters.

Road Class	Total length	Black Top	Gravel	Earthen
Strategic roads	158.60	94.60	-	64.00
Urban roads	-	-	-	-
Rural roads	1,217.69	72.63	23.74	1,121.32
Total	**1,376.29**	**167.23**	**23.74**	**1,185.32**
Strategic roads	158.60	94.60	-	64.00

Annual conservation costs are estimated at NPR 75 million based on the first year, and will be updated in the Annual Asset Management Plan (AAMP) 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 375.045 million. An analysis of road network identified 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 for existing traffic volumes. The required improvements and their estimated costs are listed below.

Improvement type	Requirement		Cost (NPR)
Bridges	370	m	222,000,000
Slab culverts	228	m	57,000,000
Causeways	2834	m	88,460,000
Hume pipes	552	units	82,800,000
Masonry retaining walls	7013	m^3	70,130,000
Gabion retaining walls	16783	m^3	67,132,000
Lined drains	398	m	398,000
Widening	4630	m	11,575,000
Rehabilitation	1.1	km	880,000
Gravelling	332.58	km	731,684,778
Blacktopping	89.67	km	511,128,021
New construction	8.83	km	54,746,000
Total			**1,897,933,799**

The available budget for the road sector for coming five years (fiscal year 2071/72 to 2075/76) is estimated to be NPR 1167.661million. 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, secondly to the improvement needs and lastly to new construction. 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 36% 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 is not possible within this DTMP period and will also be carried out under the next DTMP.

Within the DTMP period 59.03km of roads will be gravelled and 59.09 km roads will be blacktopped (27%) resulting that length being brought to a maintainable all-weather standard. VDC headquarters with access to all-weather DRCN roads or the SRN will increase from 21 to 33, while the percentage of the district population with such access will increase from 42% to 71%. After this, the resulting road status in the district will be 133.73km blacktopped, 49.47 km, gravelled and earthen surface remains to 260.16 km

ABBREVIATIONS

AAMP	Annual Asset Management Plan
ARMP	Annual Road Maintenance Plan
BT	Black Top
DDC	District Development Committee
DOLIDAR	Department of Local Infrastructure Development and Agriculture Road
DOR	Department of Road
DTICC	District Transport Infrastructure Coordination Committee
DTMP	District Transport Master Plan
DTPP	District Transport Perspective Plan
GIS	Geographical Information system
GPS	Global Positioning System
GON	Government of Nepal
GR	Gravel
Km	Kilometer
LGCDP	Local Governance and Community Development Programme
LRBP	Local Road Bridge Project
MLD	Ministry of Local Development
NPR	Nepali Rupees
PCU	Passenger Car Unit
RAP	Rural Access Programme
RCIW	Rural Community Infrastructure Works
SWAp	Sector Wide Approach
VDC	Village Development Committee
VPD	Vehicle Per Day

CONTENTS

TABLES

FIGURES

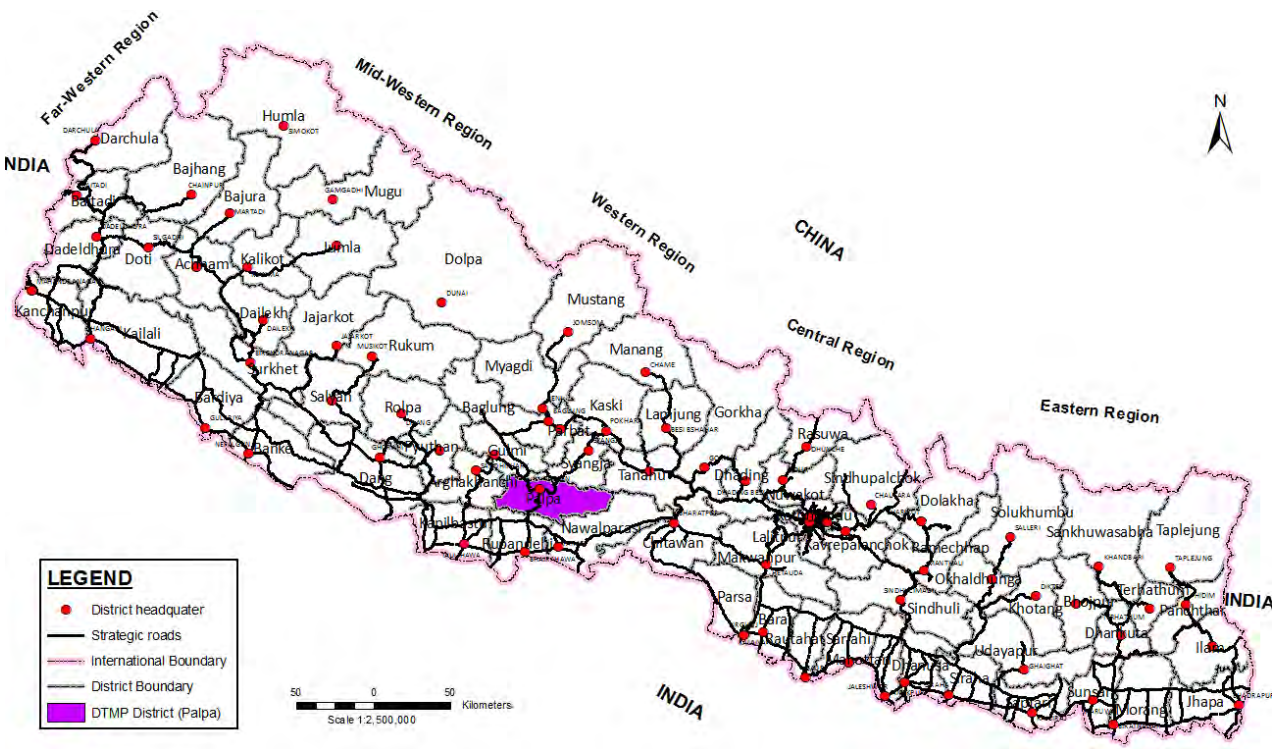
1. INTRODUCTION

Palpa District is located in Lumbini Zone of the Western Development Region of Nepal. It borders with Nawalparasi district to the East, Arghakhanchi district to the West, Tanahu, Syangja and Gulmi districts to the North and Rupandehi and Nawalparasi districts to the South. Topographically, Palpa district entails 27°34' - 27°57' latitude and 83° 15' - 84°22' longitudes. Geopolitically, the district is administratively divided into three electoral constituencies 13 Illakas which consist of 65 VDCs and 1 municipality. Each VDC is divided into 9 Wards.

The total area of the district is 1373 sq km. Considering on land use pattern, 52.13% of area is covered by forest, 41.85% area covered by agricultural land, 5.12% pasture land and remaining 0.92% area covered by others. Elevation of District Headquarters of Palpa, Putalibazar is 850 m. Kaligandaki, Tinau, Ridi and Kusum are main rivers flowing in district.

As a result of the elevation differences, the district has four different types of climate: sub-tropical in 18% area and temperate in 82% area. The annual rainfall is about 1903.5 mm and average temperatures vary from 8ºC to 28ºC. Subsistence agriculture farming, mainly cash crop production is the main source of occupation and livelihood of the majority of the population, with 62.1% of the population active in this sector. Paddy, fruits and vegetables are the main agricultural production in this district for the domestic use and export to nearby districts. Due to the fertility of the plain land, mostly central and western part of the district are suitable for production of paddy and vegetables. Valleys like Rampur, Kachal, Madi, Darpuk and Arghali are fertile and famous for agricultural production.

Figure 1 : Map of Nepal indicating Palpa district



According to the National Census 2011, the total population of the district is 261,180 comprising 145,340 female (55.6%) and 115,840 male (44.4%) residing in 59,291 households. The gender ratio of the district is 80 (80 male to 100 female) and an averageand an average population density of around 190 people per square km. The average family size is 4.4. The average literacy rate is about 76.22% (69.52% female and 84.88% male are literate). Palpa district has a multi ethnic composition with Magar, Brahman, Chhetri, Kami, Sarki, Damai, Newar, Kumal and others. The common language using for communication is Nepali and other languages are Magar and Newari.

There are numerous district and village roads. From the field study, it has been observed that most of them are in fair weather condition. Most of these roads have been constructed using excavator without proper planning and engineering design.

The study team has found Palpa district in a relatively better transport situation. This district has an easy surface transport connection with major market and commercial city like Pokhara of Kaski district and Butawal and Bhairahawa of Rupandehi district which are connected by all weather blacktop road with Palpa. However, most of the rural roads are in poor condition and need to be improved /upgraded for safe and reliable journey.

This district is served by surface transport facility linking the district with the national strategic road network through Siddhrtha Highway which has crossed district north to south having total length of 58.92 km in Palpa. Tansen –Tamghas feeder road, 35.66 km in length between the Bartung to Ridiconstructed by DoR has also been providing all weather facility.

2. DISTRICT ROAD CORE NETWORK (DRCN)

This chapter gives an overview of the existing roads in Palpa 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

Palpa district has an estimated road network of 1376.29 kilometres, including158 km of strategic roads managed by DoR and 1217 km of rural roads managed by Palpa DDC and the VDCs. Two strategic roads, Siddhartha highway and Bartung-Harthok-Ridi feeder road and some portion of the rural roads have blacktop surface. Kaligandaki corridor is in under construction and tentative 52 km length lies in Palpa district and most part within Palpa district is track open. Other district roads have gravel and earthen surface. A map of the total road network in Palpa district is shown in figure 2 at the end of this chapter.

Table 2.1.1 Road length in Palpa district (km)

Road Class	Total length	Black Top	Gravel	Earthen
Strategic roads	158.60	94.60	-	64.00
Urban roads	-	-	-	-
Rural roads	1,217.69	72.63	23.74	1,121.32
Total	**1,376.29**	**167.23**	**23.74**	**1,185.32**

2.2 NATIONAL HIGHWAYS AND FEEDER ROADS

Palpa district has a National Highways and three feeder roads totalling just over 158 km. Majority (60%) length is blacktopped and 40% is earthen surface. There is no gravel surfaced strategic road in Palpa district, but Kaligandaki corridor is 52 km earthen surfaced road. Siddhartha highway and Bartung-Harthok-Ridi feeder are managed by the Western Divisional Road Office of the Department of Roads based in Palpa.

Table 2.2.1 National Highways and Feeder Roads in Palpa district (km)

Code	Description	Total length	Black Top	Gravel	Earthen
H10	Siddhartha Highway (Ramdi-Siddhababa section)	**58.93**	58.93		
F043	Bartung-Harthok-Ridi	**35.66**	35.66		
F167	Kaligandaki Corridor	**52.00**	-		52.00
F194	Satyabati (District Border)-Badahare	**12.00**			12.00
	Total	**158.59**	**94.59**	**0.00**	**64.00**

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 the selection of the DRCN roads, account was taken of the road conditions and the existing traffic levels. The identified DRCN roads were subsequently provided with road codes according to national standards.Road codes has been assigned to village roads (road data as available in old DTMP and provided by DDC/DTO).

The resulting District Road Core Network in Palpa district is shown in Figure 3 at the end of this chapter. The DRCN consists of 38 district roads with a total length of 419.02 km including 8.83 km new length. The remaining 803.62 km of existing rural roads are not considered to be DRCN roads and are classified as village roads under the responsibility of the VDCs. Most of DRCN roads are currently earthen roads and are considered fair-weather only (Table 2.3.1). A complete list of the DRCN roads and their characteristics is provided in Table 2.3.1.

Table 2.3.1 Road length in PalpaDistrict (km)

Road Class	Total length	Black Top	Gravel	Earthen
Strategic road network	**158.60**	**94.60**		**64.00**
Highways	58.92	58.92		
Feeder roads	99.68	35.68		64.00
Urban roads				
District road core network	**427.88**	72.63	22.67	332.58
Village roads	**789.81**		1.07	788.74
Total	**1,376.29**	**167.23**	**23.74**	**1,185.32**

Table 2.3.2 District Road Core Network inPalpa District (km)

Code	Description	Total length	Black Top	Gravel	Earthen	New Cons	All weather	Fair weather
47DR001	Amalabas-Pelabas-Bhuwanpokhari VDC	**7.56**			7.56		-	7.56
47DR002	Chhahara-Juthapauwa-Satyabati	**25.72**			25.72		-	25.72
47DR003	Satyabati-Baldenggadhi	**3.09**			3.09		-	3.09
47DR004	Dhajabanne-Somadi VDC	**3.92**			3.92		-	3.92
47DR005	Kusumkhola-Mainadi-Mujhung VDC	**9.02**			9.02		-	9.02
47DR006	Batase-Pheka	**6.19**			6.19		-	6.19

Code	Description	Total length	Black Top	Gravel	Earthen	New Cons	All weather	Fair weather
47DR007	Harthok-Chhahara-Tingire	**20.41**	15.61		4.80		15.61	4.80
47DR008	Khaseuli-Deurali-Siddheshwor VDC	**20.99**		1.53	19.46		1.53	19.46
47DR009	Deurali-Khyaha	**6.58**			6.58		-	6.58
47DR010	Batasedanda-Bauwaghuma	**7.70**			7.70		-	7.70
47DR011	Dumre-Bhaisikatta-Wangsurung	**8.87**			8.87	3.06	-	8.87
47DR012	Dumre-Masyam	**6.97**			6.97		-	6.97
47DR013	Dovan-Kachal	**16.00**		7.55	8.45		7.55	8.45
47DR014	Bulthake-Khanigaun	**3.20**		0.61	2.60		0.61	2.60
47DR015	Tansen Ring road-Barangdi VDC	**4.05**			4.05		-	4.05
47DR016	Brindaban-Telgha VDC	**1.66**			1.66		-	1.66
47DR017	Nayapati-Madanpokhara VDC	**1.34**			1.34		-	1.34
47DR018	Bastari-Jhadewa-Gothadi-Khaireni	**36.15**	7.79	10.75	17.61		18.54	17.61
47DR019	Charchare-Koldanda	**8.70**			8.70	0.26	-	8.70
47DR020	Chilangdi-Chappani-Grahandanda-Ramdi	**14.93**	2.53	0.74	11.67		3.27	11.67
47DR021	Maulibhanjyang-Gunga-Mijare	**3.95**			3.95		-	3.95
47DR022	Chilangdi-Bagnas-Nayarchautari-Khanichhap	**7.05**			7.05		-	7.05
47DR023	Dharampani-Pokharathok VDC	**0.58**	0.58				0.58	-
47DR024	Lasune-Khokhola	**1.98**			1.98		-	1.98
47DR025	Aryabhanjyang-Rampur-Keladi*	**50.75**	46.13	1.49	3.13		47.62	3.13
47DR026	Jhadewa-Rahabas	**6.65**			6.65		-	6.65
47DR027	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	**4.14**			4.14	5.51	-	4.14
47DR028	Humin-Devinagar-Jalpa-Bahadurpur	**22.58**			22.58		-	22.58
47DR029	Serkabas-Heklang	**3.73**			3.73		-	3.73
47DR030	Humin-Ringneraha-Jyamire	**28.38**			28.38		-	28.38
47DR031	Barbhanjyang-Khaliban	**2.82**			2.82		-	2.82
47DR032	Siluwa-Archale	**13.25**			13.25		-	13.25
47DR033	Bejhadh-Darchha	**1.07**			1.07			1.07

Code	Description	Total length	Black Top	Gravel	Earthen	New Cons	All weather	Fair weather
							-	
47DR034	Beldanda-Galdhaphant-Kathaidanda	**3.97**			3.97		-	3.97
47DR035	Beldanda-Dhunganabesi-Mityal	**14.59**			14.59		-	14.59
47DR036	Dhunganabensi-Kyangrung-Jhirubas	**13.97**			13.97		-	13.97
47DR037	Khoptar-Kirtipur-Panthe-Sahalkot	**16.91**			16.91		-	16.91
47DR038	Bhalayatar-Phurkechaur-Anandibhanjyang-Bakamalang	**18.47**			18.47		-	18.47
	Total	**427.88**	**72.63**	**22.67**	**332.58**	**8.83**	**95.30**	**332.58**

Parts of following DRCN Road are also mentioned in Department of Road's SSRN-2011:

i. 47DR025: Aryabhanjyang-Rampur-Keladi (47.62 km)

Similarly following two DRCN roads are proposed to links VDC centers which are merged in newly formed Rampur municipality

ii. 47DR03: Barbhanjyang-Khaliban (2.82 km)
iii. 47 DR033: Bejhadh-Darchha (1.07 km)

This results in reduce of DRCN length to376.36 km.

2.4 VILLAGE ROADS

The 789.81 km of remaining roads 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 66 VDCs and municipality in Palpa 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 11.96 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. However, this district funding will be mainly for maintenance, especially emergency maintenance and routine/recurrent maintenance to keep the village roads open.

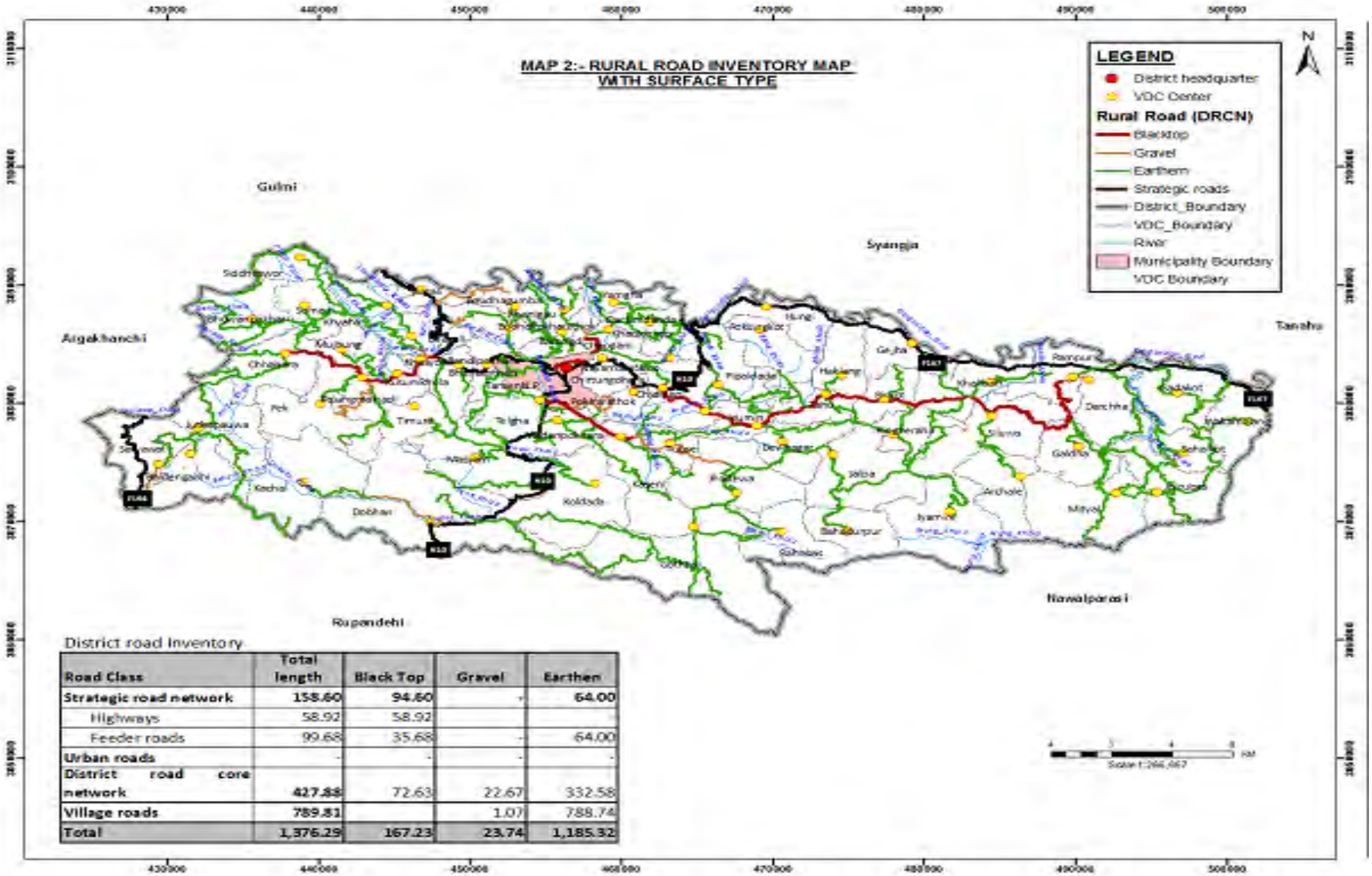
In Palpa district, there are some district roads which in future will be possible inter-district link roads. After completing the target of planned roads, there will be good transport facilities for the people of two districts. District should give priority for constructing the planned road which will be inter-district linkage and the DTMP should be updated regularly. Some roads

are already completed which needs rehabilitation and regular maintenance are also incorporated in table. List of possible/existing inter-district link roads are as follows:

Table 6.3: List of Inter-District Transport Linkages

SN	Road code	Name of Road	Total Length (Km)	Length of Road for New Construction (Km)	Links to
1	47A003R	Harthok-Chhahara-Tingire	25.0	0	Arghakhanchi
2	47A004R	Bastari-Jhadewa-Khaireni	48.0	0	Nawalparasi
3	47A005R	Chilangdi-Chappani-Garandada-Ramdi	16.0	0	Syangja
4	47A012R	Beldanda-Dhunganabesi-Mityal-Arungkhola	27.0	0	Nawalparasi
5	47A021R	Chhahara-Fek-Kachal	20.0	0	Rupandehi
6	47A018R	Humin-Devinagar-Jalpa-Bahadurpur	22.0	5.2	Nawalparasi
7	47A016R	Raika-Anandibhanjyang-Rupsebhanjyang	30.0	2.0	Nawalparasi
8	47A002R	Argali Ranighat Ramdi-Pipaldanda - Genjha - Rampur-Raikabhanjyang	84.0	15.0	Nawalparasi
9	47A017R	Saljhandi-Juthapauwa-Sunguredhunga	22.3	2.0	Rupandehi
10	47A013R	Khaseuli-Deurali-Manabhag	25.0	2.0	Gulmi
11	47B001R	Dhajabadne-Digha-Siddheswor(Manabag)	10	0	Gulmi
12	47B038R	Jagat-Bhutuke-Mahalpokhari-(Sunawal)	10	0	Nawalparasi
13	47B039R	Jhigamara-Ratamata-Chahala-Juthapauwa	14.0	0	Rupandehi
14	47B017R	Bhuwanpokhari (Pelabas)-Balgha-Arghakhanchi	8.5	0	Arghakhanchi

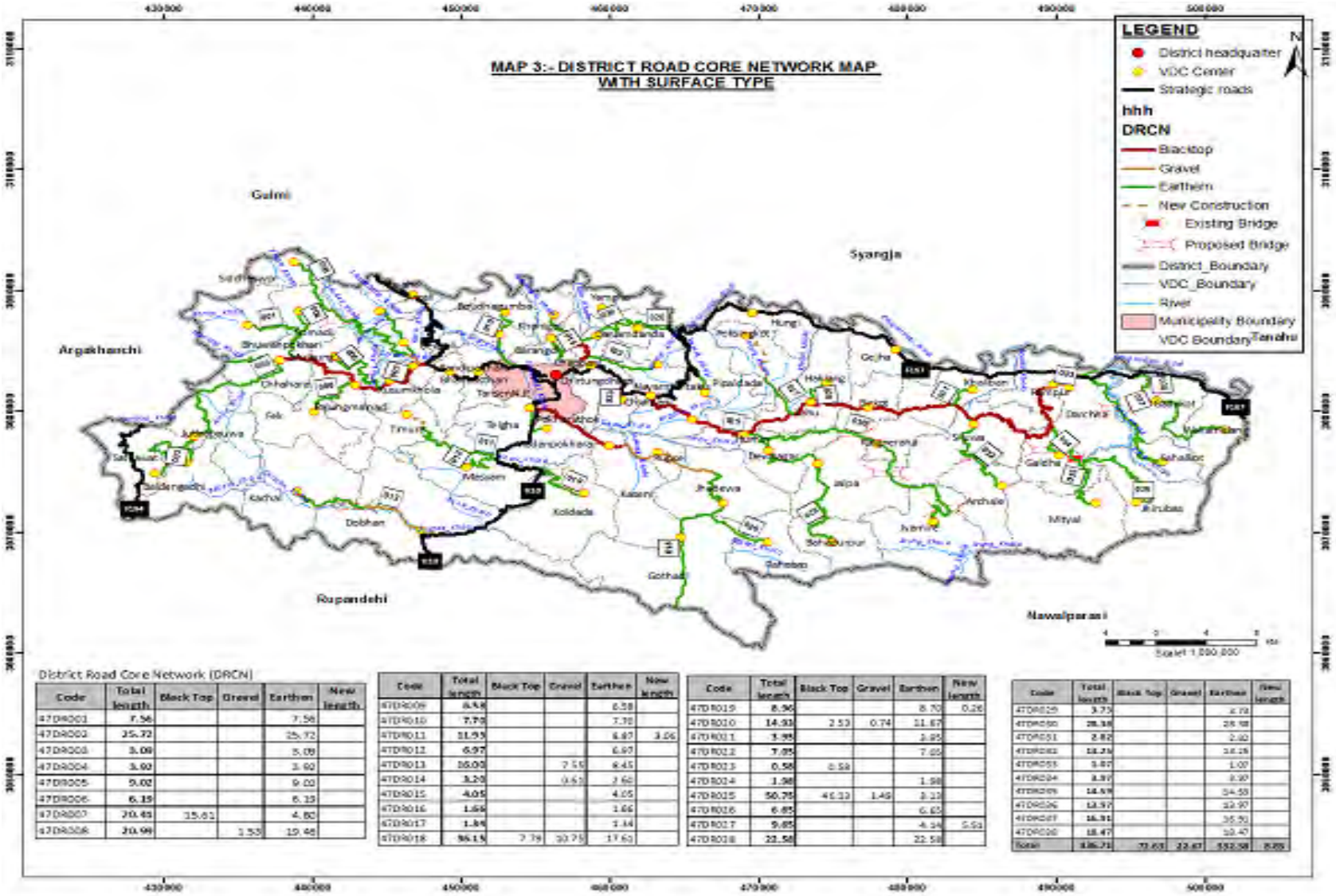
Figure 2 : Total Road Inventory Map for Palpa District



District road Inventory

Road Class	Total length	Black Top	Gravel	Earthen
Strategic road network	**158.60**	**94.60**	-	**64.00**
Highways	58.92	58.92		
Feeder roads	99.68	35.68	-	64.00
Urban roads	-	-	-	-
District road core network	**427.88**	72.63	22.67	332.58
Village roads	**789.81**		1.07	788.74
Total	**1,376.29**	**167.23**	**23.74**	**1,185.32**

Figure 3 : District Road Core Network (DRCN) Map



District Road Core Network (DRCN)

Code	Total length	Black Top	Gravel	Earthen	New length
47DR001	7.56			7.56	
47DR002	25.72			25.72	
47DR003	5.09			5.09	
47DR004	3.60			3.60	
47DR005	9.00			9.00	
47DR006	6.19			6.19	
47DR007	20.43	15.61		4.82	
47DR008	20.99		1.53	19.46	

Code	Total length	Black Top	Gravel	Earthen	New length
47DR009	6.58			6.58	
47DR010	7.79			7.79	
47DR011	11.55			8.49	3.06
47DR012	6.97			6.97	
47DR013	16.00		7.55	8.45	
47DR014	3.20		0.61	2.60	
47DR015	4.05			4.05	
47DR016	1.66			1.66	
47DR017	1.84			1.84	
47DR018	36.15	7.79	10.75	17.61	

Code	Total length	Black Top	Gravel	Earthen	New length
47DR019	8.96			8.70	0.26
47DR020	14.93	2.53	0.74	11.67	
47DR021	3.95			3.95	
47DR022	7.05			7.05	
47DR023	0.58	0.58			
47DR024	1.98			1.98	
47DR025	50.75	45.33	1.49	3.93	
47DR026	6.65			6.65	
47DR027	9.85			4.34	5.51
47DR028	22.58			22.58	

Code	Total length	Black Top	Gravel	Earthen	New length
47DR029	3.73			2.73	
47DR030	28.58			28.58	
47DR031	2.82			2.82	
47DR032	18.24			18.24	
47DR033	1.07			1.07	
47DR034	3.37			3.37	
47DR035	14.59			14.59	
47DR036	12.97			12.97	
47DR037	16.31			16.31	
47DR038	18.47			18.47	
Total	486.71	72.63	22.47	532.58	8.85

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 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)
47DR001	7.56	7.56	7.56	7.56
47DR002	25.72	25.72	25.72	25.72
47DR003	3.09	3.09	3.09	3.09
47DR004	3.92	3.92	3.92	3.92
47DR005	9.02	9.02	9.02	9.02
47DR006	6.19	6.19	6.19	6.19
47DR007	20.41	20.41	20.41	20.41
47DR008	20.99	20.99	20.99	20.99
47DR009	6.58	6.58	6.58	6.58
47DR010	7.70	7.70	7.70	7.70
47DR011	8.87	8.87	8.87	8.87
47DR012	6.97	6.97	6.97	6.97
47DR013	16.00	16.00	16.00	16.00
47DR014	3.20	3.20	3.20	3.20
47DR015	4.05	4.05	4.05	4.05
47DR016	1.66	1.66	1.66	1.66
47DR017	1.34	1.34	1.34	1.34
47DR018	36.15	36.15	36.15	36.15
47DR019	8.70	8.70	8.70	8.70
47DR020	14.93	14.93	14.93	14.93
47DR021	3.95	3.95	3.95	3.95
47DR022	7.05	7.05	7.05	7.05
47DR023	0.58	0.58	0.58	0.58
47DR024	1.98	1.98	1.98	1.98
47DR025	50.75	50.75	50.75	50.75
47DR026	6.65	6.65	6.65	6.65
47DR027	4.14	4.14	4.14	4.14
47DR028	22.58	22.58	22.58	22.58
47DR029	3.73	3.73	3.73	3.73
47DR030	28.38	28.38	28.38	28.38
47DR031	2.82	2.82	2.82	2.82
47DR032	13.25	13.25	13.25	13.25
47DR033	1.07	1.07	1.07	1.07
47DR034	3.97	3.97	3.97	3.97
47DR035	14.59	14.59	14.59	14.59
47DR036	13.97	13.97	13.97	13.97
47DR037	16.91	16.91	16.91	16.91
47DR038	18.47	18.47	18.47	18.47
Total	**427.88**	**427.88**	**427.88**	**427.88**

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 Palpa 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 50passenger 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

Two roads are identifiedfor rehabilitation in the district road core network.

Table 3.2.1 Sections of the district road core network requiring rehabilitation

Code	Description	Total length (km)	Rehabilitation (km)
47DR001	Amalabas-Pelabas-Bhuwanpokhari VDC	7.56	1.00
47DR006	Batase-Pheka	6.19	0.10
	Total	**13.75**	**1.10**

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. Total 332.58km DRCN need to be gravelled in Palpa district which is given in table 3.2.2 below.

Table 3.2.2 Sections of the district road core network requiring gravelling

Code	Description	Total length (km)	Gravelling (km)
47DR001	Amalabas-Pelabas-Bhuwanpokhari VDC	7.56	7.56
47DR002	Chhahara-Juthapauwa-Satyabati	25.72	25.72
47DR003	Satyabati-Baldenggadhi	3.09	3.09
47DR004	Dhajabanne-Somadi VDC	3.92	3.92
47DR005	Kusumkhola-Mainadi-Mujhung VDC	9.02	9.02
47DR006	Batase-Pheka	6.19	6.19
47DR007	Harthok-Chhahara-Tingire	20.41	4.80
47DR008	Khaseuli-Deurali-Siddheshwor VDC	20.99	19.46
47DR009	Deurali-Khyaha	6.58	6.58
47DR010	Batasedanda-Bauwaghuma	7.70	7.70
47DR011	Dumre-Bhaisikatta-Wangsurung	8.87	8.87
47DR012	Dumre-Masyam	6.97	6.97
47DR013	Dovan-Kachal	16.00	8.45

Code	Description	Total length (km)	Gravelling (km)
47DR014	Bulthake-Khanigaun	3.20	2.60
47DR015	Tansen Ring road-Barangdi VDC	4.05	4.05
47DR016	Brindaban-Telgha VDC	1.66	1.66
47DR017	Nayapati-Madanpokhara VDC	1.34	1.34
47DR018	Bastari-Jhadewa-Gothadi-Khaireni	36.15	17.61
47DR019	Charchare-Koldanda	8.70	8.70
47DR020	Chilangdi-Chappani-Grahandanda-Ramdi	14.93	11.67
47DR021	Maulibhanjyang-Gunga-Mijare	3.95	3.95
47DR022	Chilangdi-Bagnas-Nayarchautari-Khanichhap	7.05	7.05
47DR023	Dharampani-Pokharathok VDC	0.58	-
47DR024	Lasune-Khokhola	1.98	1.98
47DR025	Aryabhanjyang-Rampur-Keladi	50.75	3.13
47DR026	Jhadewa-Rahabas	6.65	6.65
47DR027	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	4.14	4.14
47DR028	Humin-Devinagar-Jalpa-Bahadurpur	22.58	22.58
47DR029	Serkabas-Heklang	3.73	3.73
47DR030	Humin-Ringneraha-Jyamire	28.38	28.38
47DR031	Barbhanjyang-Khaliban	2.82	2.82
47DR032	Siluwa-Archale	13.25	13.25
47DR033	Bejhadh-Darchha	1.07	1.07
47DR034	Beldanda-Galdhaphant-Kathaidanda	3.97	3.97
47DR035	Beldanda-Dhunganabesi-Mityal	14.59	14.59
47DR036	Dhunganabensi-Kyangrung-Jhirubas	13.97	13.97
47DR037	Khoptar-Kirtipur-Panthe-Sahalkot	16.91	16.91
47DR038	Bhalayatar-Phurkechaur-Anandibhanjyang-Bakamalang	18.47	18.47
	Total		**332.58**

3.2.3 CROSS DRAINAGE

The need for cross drainage was identified for different DRCN roads. Total of 10 bridges with length of 370m, 30 slab culverts with total length of 228 m, 396 causeways (concrete and stone) with total length of 2834m, and 552 pipe culverts were identified as cross drainage structure.

Table 3.2.3 Required cross drainage structures

Code	Description	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)
47DR001	Amalabas-Pelabas-Bhuwanpokhari VDC	-	-	18	46	12
47DR002	Chhahara-Juthapauwa-Satyabati	-	30	98	139	29
47DR003	Satyabati-Baldenggadhi	-	-	28	30	6
47DR004	Dhajabanne-Somadi VDC	-	-	-	20	6
47DR005	Kusumkhola-Mainadi-Mujhung VDC	-	-	16	40	17

Code	Description	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)
47DR006	Batase-Pheka	-	-	18	47	10
47DR007	Harthok-Chhahara-Tingire	-	-	-	-	-
47DR008	Khaseuli-Deurali-Siddheshwor VDC	30	-	54	76	28
47DR009	Deurali-Khyaha	-	-	18	34	11
47DR010	Batasedanda-Bauwaghuma	-	-	8	51	12
47DR011	Dumre-Bhaisikatta-Wangsurung	-	14	20	71	19
47DR012	Dumre-Masyam	-	-	16	32	7
47DR013	Dovan-Kachal	90	-	86	21	20
47DR014	Bulthake-Khanigaun	-	-	-	25	4
47DR015	Tansen Ring road-Barangdi VDC	-			31	9
47DR016	Brindaban-Telgha VDC		6.0		13	5
47DR017	Nayapati-Madanpokhara VDC	-	-	-	21	2
47DR018	Bastari-Jhadewa-Gothadi-Khaireni	-	40	10	104	36
47DR019	Charchare-Koldanda	40	-	18	84	17
47DR020	Chilangdi-Chappani-Grahandanda-Ramdi	-	-	18	55	14
47DR021	Maulibhanjyang-Gunga-Mijare	-	-	8	28	9
47DR022	Chilangdi-Bagnas-Nayarchautari-Khanichhap	-	-	-	48	8
47DR023	Dharampani-Pokharathok VDC	-	-	-	-	-
47DR024	Lasune-Khokhola	-	-	8	12	4
47DR025	Aryabhanjyang-Rampur-Keladi	-	10	-	8	5
47DR026	Jhadewa-Rahabas	-	16	22	59	13
47DR027	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	-	-	-	53	5
47DR028	Humin-Devinagar-Jalpa-Bahadurpur	-	-	40	270	41
47DR029	Serkabas-Heklang	-	-	12	67	9
47DR030	Humin-Ringneraha-Jyamire	80	30	54	149	47
47DR031	Barbhanjyang-Khaliban	-	-	-	33	5
47DR032	Siluwa-Archale	40	6	18	128	28
47DR033	Bejhadh-Darchha	-	-	-	-	1
47DR034	Beldanda-Galdhaphant-Kathaidanda	40	13	18	18	9
47DR035	Beldanda-Dhunganabesi-Mityal	-	10	36	78	31
47DR036	Dhunganabensi-Kyangrung-Jhirubas	-	10	26	48	13
47DR037	Khoptar-Kirtipur-Panthe-Sahalkot	50	35	-	149	34
47DR038	Bhalayatar-Phurkechaur-Anandibhanjyang-Bakamalang	-	8	-	78	26
	Total	**370**	**228**	**668**	**2,166**	**552**

LIST OF BRIDGE

Road Code	Name of Road	Name of River	Length of Bridge (m)	Remarks
47DR008	Khaseuli-Deurali-Siddheshwor VDC	Sardewa Khola	30	
47DR013	Dovan-Kachal	Jhumsa Khola, Kurban Khola	50+40	

47DR019	Charchare-Koldanda	Tinau Khola	40	
47DR030	Humin-Ringneraha-Jyamire	Purwa Khola, Jyamire Khola	25+25+30	
47DR032	Siluwa-Archale	Mijdi Khola	40	
47DR034	Beldanda-Galdhaphant-Kathaidanda		40	
47DR037	Khoptar-Kirtipur-Panthe-Sahalkot	Nisdi Khola	50	

3.2.4 PROTECTIVE STRUCTURES

Based on the road survey carried out in Palpa, following retaining/breast walls and lined drain were identified as required to ensure the protection of the district road core network.

Table 3.2.4 Required protective structures

Code	Description	Masonry walls (m3)	Gabion walls (m3)	Lined drain (m)
47DR001	Amalabas-Pelabas-Bhuwanpokhari VDC	210	415	
47DR002	Chhahara-Juthapauwa-Satyabati	815	1,325	
47DR003	Satyabati-Baldenggadhi	90	210	
47DR004	Dhajabanne-Somadi VDC	143	440	
47DR005	Kusumkhola-Mainadi-Mujhung VDC	413	728	
47DR006	Batase-Pheka	63	180	
47DR007	Harthok-Chhahara-Tingire	-	110	
47DR008	Khaseuli-Deurali-Siddheshwor VDC	340	1,110	
47DR009	Deurali-Khyaha	90	360	
47DR010	Batasedanda-Bauwaghuma	226	420	
47DR011	Dumre-Bhaisikatta-Wangsurung	235	502	
47DR012	Dumre-Masyam	131	540	
47DR013	Dovan-Kachal	295	573	
47DR014	Bulthake-Khanigaun	-	30	
47DR015	Tansen Ring road-Barangdi VDC	158	180	
47DR016	Brindaban-Telgha VDC	-	-	
47DR017	Nayapati-Madanpokhara VDC	-	-	
47DR018	Bastari-Jhadewa-Gothadi-Khaireni	398	1,100	398
47DR019	Charchare-Koldanda	233	380	
47DR020	Chilangdi-Chappani-Grahandanda-Ramdi	90	298	
47DR021	Maulibhanjyang-Gunga-Mijare	40	120	
47DR022	Chilangdi-Bagnas-Nayarchautari-Khanichhap	-	75	
47DR023	Dharampani-Pokharathok VDC	-	-	
47DR024	Lasune-Khokhola	75	150	
47DR025	Aryabhanjyang-Rampur-Keladi	-	180	
47DR026	Jhadewa-Rahabas	60	195	
47DR027	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	-	125	
47DR028	Humin-Devinagar-Jalpa-Bahadurpur	270	728	
47DR029	Serkabas-Heklang	-	63	
47DR030	Humin-Ringneraha-Jyamire	741	1,760	
47DR031	Barbhanjyang-Khaliban	-	300	

Code	Description	Masonry walls (m3)	Gabion walls (m3)	Lined drain (m)
47DR032	Siluwa-Archale	443	920	
47DR033	Bejhadh-Darchha	-	-	
47DR034	Beldanda-Galdhaphant-Kathaidanda	276	415	
47DR035	Beldanda-Dhunganabesi-Mityal	285	525	
47DR036	Dhunganabensi-Kyangrung-Jhirubas	360	738	
47DR037	Khoptar-Kirtipur-Panthe-Sahalkot	280	748	
47DR038	Bhalayatar-Phurkechaur-Anandibhanjyang-Bakamalang	253	840	
	Total	**7,013**	**16,783**	**398**

3.2.5 WIDENING

Widening of the district road core network in Palpa is required only in specific locations (especially in loops) 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.

Table 3.2.5 Sections of the District Road Core Network requiring widening

Code	Description	Total length (km)	Widening (m)
47DR001	Amalabas-Pelabas-Bhuwanpokhari VDC	7.56	23.00
47DR002	Chhahara-Juthapauwa-Satyabati	25.72	20.00
47DR003	Satyabati-Baldenggadhi	3.09	-
47DR004	Dhajabanne-Somadi VDC	3.92	18.00
47DR005	Kusumkhola-Mainadi-Mujhung VDC	9.02	15.00
47DR006	Batase-Pheka	6.19	16.00
47DR007	Harthok-Chhahara-Tingire	20.41	86.00
47DR008	Khaseuli-Deurali-Siddheshwor VDC	20.99	16.00
47DR009	Deurali-Khyaha	6.58	22.00
47DR010	Batasedanda-Bauwaghuma	7.70	22.00
47DR011	Dumre-Bhaisikatta-Wangsurung	8.87	12.00
47DR012	Dumre-Masyam	6.97	13.00
47DR013	Dovan-Kachal	16.00	36.00
47DR014	Bulthake-Khanigaun	3.20	18.00
47DR015	Tansen Ring road-Barangdi VDC	4.05	6.00

Code	Description	Total length (km)	Widening (m)
47DR016	Brindaban-Telgha VDC	1.66	12.00
47DR017	Nayapati-Madanpokhara VDC	1.34	16.00
47DR018	Bastari-Jhadewa-Gothadi-Khaireni	36.15	26.00
47DR019	Charchare-Koldanda	8.70	-
47DR020	Chilangdi-Chappani-Grahandanda-Ramdi	14.93	34.00
47DR021	Maulibhanjyang-Gunga-Mijare	3.95	12.00
47DR022	Chilangdi-Bagnas-Nayarchautari-Khanichhap	7.05	18.00
47DR023	Dharampani-Pokharathok VDC	0.58	12.00
47DR024	Lasune-Khokhola	1.98	11.00
47DR025	Aryabhanjyang-Rampur-Keladi	50.75	130.00
47DR026	Jhadewa-Rahabas	6.65	14.00
47DR027	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	4.14	10.00
47DR028	Humin-Devinagar-Jalpa-Bahadurpur	22.58	18.00
47DR029	Serkabas-Heklang	3.73	11.00
47DR030	Humin-Ringneraha-Jyamire	28.38	16.00
47DR031	Barbhanjyang-Khaliban	2.82	15.00
47DR032	Siluwa-Archale	13.25	18.00
47DR033	Bejhadh-Darchha	1.07	16.00
47DR034	Beldanda-Galdhaphant-Kathaidanda	3.97	6.00
47DR035	Beldanda-Dhunganabesi-Mityal	14.59	21.00
47DR036	Dhunganabensi-Kyangrung-Jhirubas	13.97	7.00
47DR037	Khoptar-Kirtipur-Panthe-Sahalkot	16.91	19.00
47DR038	Bhalayatar-Phurkechaur-Anandibhanjyang-Bakamalang	18.47	18.00
	Total		**4630.0**

3.2.6 BLACKTOPPING

An analysis of the traffic data for the different roads making up the district road core network (see **Annex 1**) shows that there is six roads that are eligible for blacktopping (traffic volume exceeds 50 PCU). 72km length offiveDRCN roads are already blacktopped.

Table 3.2.6 Sections of the district road core network requiring blacktopping

Code	Description	Total length (km)	Traffic (PCU)	Blacktopping (km)
47DR001	Amalabas-Pelabas-Bhuwanpokhari VDC	7.56	54	7.56
47DR007	Harthok-Chhahara-Tingire	20.41	209	4.80
47DR013	Dovan-Kachal	16.00	114	16.00
47DR017	Nayapati-Madanpokhara VDC	1.34	52	1.34
47DR018	Bastari-Jhadewa-Gothadi-Khaireni	30.03	70	28.36
47DR020	Chilangdi-Chappani-Garandada-Ramdi	14.93	82	12.40
47DR025	Aryabhanjyang-Rampur	50.74	315	4.62
47DR035	Beldanda-Dhunganabesi-Mityal	14.59	61	14.59
	Total	**155.60**		**89.67**

3.3 NEW CONSTRUCTION

New construction of DRCN roads is required to connect the remaining VDC headquarters. A list of proposed roads for new construction is provided below. These roads provide access to 3 VDC HQs that do not currently have road access.

Table 3.3.1 Sections of the district road core network requiring new construction

Code	Description	New VDCs	Existing length	New length	Bridge (m)
47DR011	Dumre-Bhaisikatta-Wangsurung	Thimure	8.87	3.06	
47DR019	Charchare-Koldanda	Koldanda	8.70	0.26	
47DR027	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	Phoksingkot	4.14	5.51	
	Total		**21.71**	**8.83**	**-**

3.4 DISTRICT TRANSPORT PERSPECTIVE PLAN

The DTPP foresees bringing the entire existing district road core network to maintainable all-weather status, and expanding it to provide access to an additional 3 VDC headquarters. For this purpose, 89.67 km will be blacktopped, 332.58 km will be gravelled and number of different cross drainage and protective structures will be constructed. Further 8.83 km of new road will be constructed to maintainable all-weather gravel standard providing access to 3 additional VDC HQs. The district road core network will subsequently consist of 427.88 km of maintainable all-weather roads. The following table lists the required interventions, while the proposed network is shown in the DTPP map in figure 4.

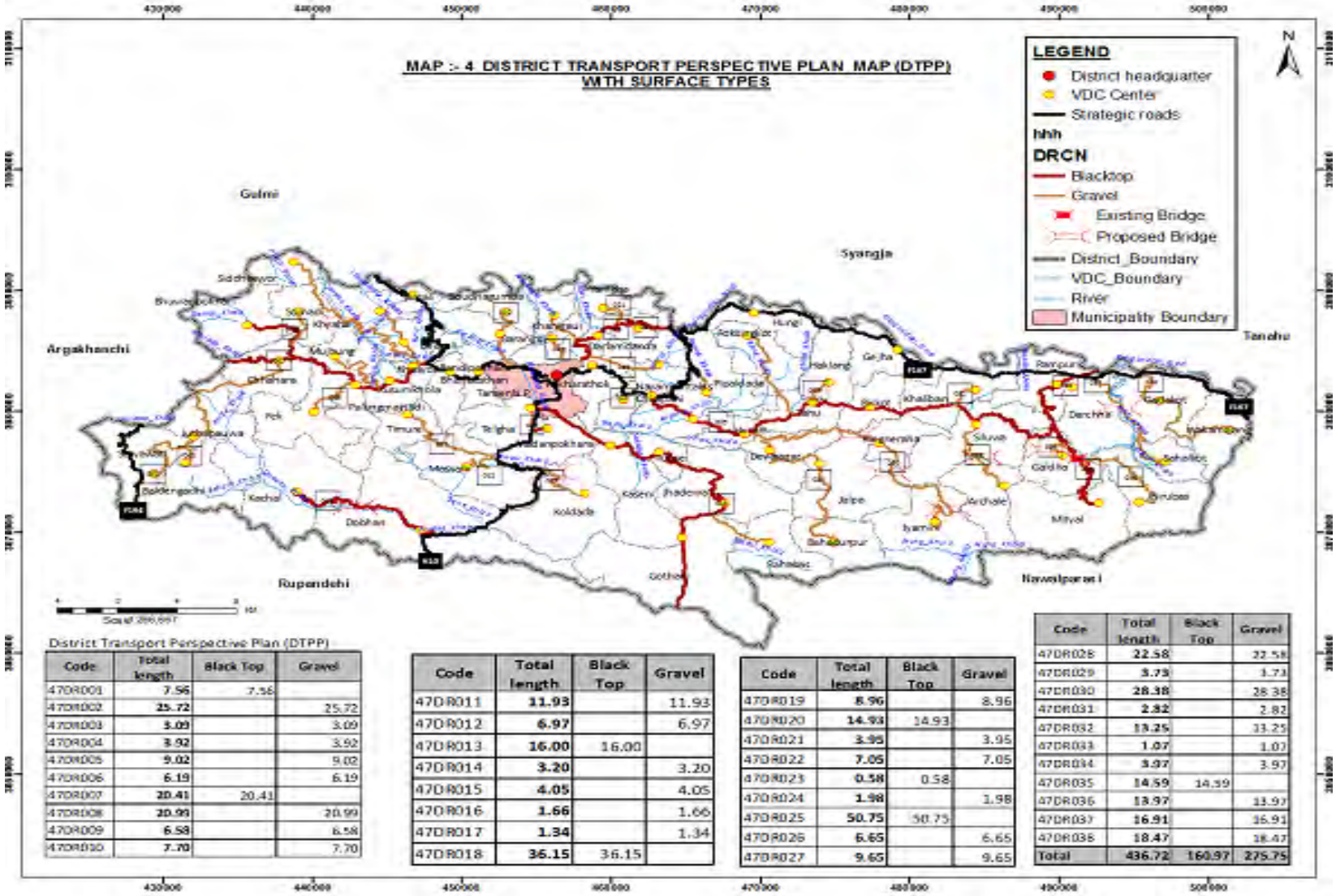
Table 3.4.1 District Transport Perspective Plan

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)
47DR001	7.56	7.56	7.56	7.56	1.00	7.56	7.56	90.00	-	-	18.00	46.00	12.00	210.00	415.00	-	-
47DR002	25.72	25.72	25.72	25.72	-	25.72	-	325.00	-	30.00	98.00	139.00	29.00	815.00	1,325.00	-	-
47DR003	3.09	3.09	3.09	3.09	-	3.09	-	50.00	-	-	28.00	30.00	6.00	90.00	210.00	-	-
47DR004	3.92	3.92	3.92	3.92	-	3.92	-	55.00	-	-	-	20.00	6.00	143.00	440.00	-	-
47DR005	9.02	9.02	9.02	9.02	-	9.02	-	40.00	-	-	16.00	40.00	17.00	413.00	728.00	-	-
47DR006	6.19	6.19	6.19	6.19	0.10	6.19	-	95.00	-	-	18.00	47.00	10.00	63.00	180.00	-	-
47DR007	20.41	20.41	20.41	20.41	-	4.80	4.80	-	-	-	-	-	-	-	110.00	-	-
47DR008	20.99	20.99	20.99	20.99	-	19.46	-	230.00	30.00	-	54.00	76.00	28.00	340.00	1,110.00	-	-
47DR009	6.58	6.58	6.58	6.58	-	6.58	-	95.00	-	-	18.00	34.00	11.00	90.00	360.00	-	-
47DR010	7.70	7.70	7.70	7.70	-	7.70	-	90.00	-	-	8.00	51.00	12.00	226.00	420.00	-	-
47DR011	8.87	8.87	8.87	8.87	-	8.87	-	200.00	-	14.00	20.00	71.00	19.00	235.00	502.00	-	3.06
47DR012	6.97	6.97	6.97	6.97	-	6.97	-	-	-	-	16.00	32.00	7.00	131.00	540.00	-	-
47DR013	16.00	16.00	16.00	16.00	-	8.45	16.00	105.00	90.00	-	86.00	21.00	20.00	295.00	573.00	-	-
47DR014	3.20	3.20	3.20	3.20	-	2.60	-	-	-	-	-	25.00	4.00	-	30.00	-	-
47DR015	4.05	4.05	4.05	4.05	-	4.05	-	105.00	-	-	-	31.00	9.00	158.00	180.00	-	-

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)
47DR016	1.66	1.66	1.66	1.66	-	1.66	-	75.00	-	6.00	-	13.00	5.00	-	-	-	-
47DR017	1.34	1.34	1.34	1.34	-	1.34	1.34	-	-	-	-	21.00	2.00	-	-	-	-
47DR018	36.15	36.15	36.15	36.15	-	17.61	28.36	70.00	-	40.00	10.00	104.00	36.00	398.00	1,100.00	398.0	-
47DR019	8.70	8.70	8.70	8.70	-	8.70	-	135.00	40.00	-	18.00	84.00	17.00	233.00	380.00	-	0.26
47DR020	14.93	14.93	14.93	14.93	-	11.67	12.40	80.00	-	-	18.00	55.00	14.00	90.00	298.00	-	-
47DR021	3.95	3.95	3.95	3.95	-	3.95	-	-	-	-	8.00	28.00	9.00	40.00	120.00	-	-
47DR022	7.05	7.05	7.05	7.05	-	7.05	-	55.00	-	-	-	48.00	8.00	-	75.00	-	-
47DR023	0.58	0.58	0.58	0.58	-	-	-	-	-	-	-	-	-	-	-	-	-
47DR024	1.98	1.98	1.98	1.98	-	1.98	-	-	-	-	8.00	12.00	4.00	75.00	150.00	-	-
47DR025	50.75	50.75	50.75	50.75	-	3.13	4.62	30.00	-	10.00	-	8.00	5.00	-	180.00	-	-
47DR026	6.65	6.65	6.65	6.65	-	6.65	-	-	-	16.00	22.00	59.00	13.00	60.00	195.00	398.00	-
47DR027	4.14	4.14	4.14	4.14	-	4.14	-	30.00	-	-	-	53.00	5.00	-	125.00	-	5.51
47DR028	22.58	22.58	22.58	22.58	-	22.58	-	400.00	-	-	40.00	270.00	41.00	270.00	728.00	-	-
47DR029	3.73	3.73	3.73	3.73	-	3.73	-	55.00	-	-	12.00	67.00	9.00	-	63.00	-	-
47DR030	28.38	28.38	28.38	28.38	-	28.38	-	340.00	80.00	30.00	54.00	149.00	47.00	741.00	1,760.00	-	-
47DR031	2.82	2.82	2.82	2.82	-	2.82	-	80.00	-	-	-	33.00	5.00	-	300.00	-	-

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)
47DR032	13.25	13.25	13.25	13.25	-	13.25	-	160.00	40.00	6.00	18.00	128.00	28.00	443.00	920.00	-	-
47DR033	1.07	1.07	1.07	1.07	-	1.07	-	-	-	-	-	-	1.00	-	-	-	-
47DR034	3.97	3.97	3.97	3.97	-	3.97	-	85.00	40.00	13.00	18.00	18.00	9.00	276.00	415.00	-	-
47DR035	14.59	14.59	14.59	14.59	-	14.59	14.59	155.00	-	10.00	36.00	78.00	31.00	285.00	525.00	-	-
47DR036	13.97	13.97	13.97	13.97	-	13.97	-	370.00	-	10.00	26.00	48.00	13.00	360.00	738.00	-	-
47DR037	16.91	16.91	16.91	16.91	-	16.91	-	280.00	50.00	35.00	-	149.00	34.00	280.00	748.00	-	-
47DR038	18.47	18.47	18.47	18.47	-	18.47	-	750.00	-	8.00	-	78.00	26.00	253.00	840.00	-	-
Total	**427.88**	**427.88**	**427.88**	**427.88**	**1.10**	**332.58**	**89.67**	**4,630**	**370**	**228**	**668**	**2,166**	**552**	**7,013**	**16,783**	**398**	**8.83**

Figure 4 : District Transport Perspective Plan (DTPP)



District Transport Perspective Plan (DTPP)

Code	Total length	Black Top	Gravel
47DR001	7.56	7.56	
47DR002	25.72		25.72
47DR003	3.09		3.09
47DR004	3.92		3.92
47DR005	9.02		9.02
47DR006	6.19		6.19
47DR007	20.41	20.41	
47DR008	20.99		20.99
47DR009	6.58		6.58
47DR010	7.70		7.70

Code	Total length	Black Top	Gravel
47DR011	11.93		11.93
47DR012	6.97		6.97
47DR013	16.00	16.00	
47DR014	3.20		3.20
47DR015	4.05		4.05
47DR016	1.66		1.66
47DR017	1.34		1.34
47DR018	36.15	36.15	

Code	Total length	Black Top	Gravel
47DR019	8.96		8.96
47DR020	14.93	14.93	
47DR021	3.95		3.95
47DR022	7.05		7.05
47DR023	0.58	0.58	
47DR024	1.98		1.98
47DR025	50.75	50.75	
47DR026	6.65		6.65
47DR027	9.65		9.65

Code	Total length	Black Top	Gravel
47DR028	22.58		22.58
47DR029	3.73		3.73
47DR030	28.38		28.38
47DR031	2.82		2.82
47DR032	13.25		13.25
47DR033	1.07		1.07
47DR034	3.97		3.97
47DR035	14.59	14.59	
47DR036	13.97		13.97
47DR037	16.91		16.91
47DR038	18.47		18.47
Total	436.72	160.97	275.75

4. COST ESTIMATION

Standard costs for the different activities required have been referred from guideline during cost estimation. Estimation of conservation activities are calculated for a year and then it is multiplied by five to determine total conservation cost for the DTMP period. But estimation of improvement and new construction activities are calculated by summation of estimation of the total cost required for each activities.

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. The standard cost for recurrent maintenance in guidelines seems very high so it is reduced and makes realistic by studying reports/estimates of recurrent maintenance carried out by DoR. 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 AAMP.

Table 4.1.1 Standard unit costs for conservation

Activity	Unit	Unit cost (NPR/km)
Emergency maintenance	km	30,000
Routine maintenance	km	20,000
Recurrent maintenance (blacktop)	km	200,000
Recurrent maintenance (gravel)	km	100,000
Recurrent maintenance (earthen)	km	50,000
Periodic maintenance (blacktop)	km	200,000
Periodic maintenance (gravel)	km	250,000

Source: DTMP Guideline, DoLIDAR, 2012

First year the estimated costs for conservation of the DRCN come to NPR 75.009 millions. Based on cost for first year, costs for conservation of the DRCN for the next 5 years are estimated at NPR 375.045 million. These costs will change slightly as roads are improved and the standard conservation costs change. This will be updated in the AAMP 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
47DR001	7.56	-	-	7.56	227	151	-	-	378	-	-	**756**	**3,782**
47DR002	25.72	-	-	25.72	772	514	-	-	1,286	-	-	**2,572**	**12,859**
47DR003	3.09	-	-	3.09	93	62	-	-	155	-	-	**309**	**1,547**
47DR004	3.92	-	-	3.92	118	78	-	-	196	-	-	**392**	**1,960**
47DR005	9.02	-	-	9.02	271	180	-	-	451	-	-	**902**	**4,510**
47DR006	6.19	-	-	6.19	186	124	-	-	310	-	-	**619**	**3,097**
47DR007	20.41	15.61	-	4.80	612	408	3,121	-	240	3,121	-	**7,503**	**37,514**
47DR008	20.99	-	1.53	19.46	630	420	-	153	973	-	383	**2,559**	**12,793**
47DR009	6.58	-	-	6.58	197	132	-	-	329	-	-	**658**	**3,290**
47DR010	7.70	-	-	7.70	231	154	-	-	385	-	-	**770**	**3,852**
47DR011	8.87	-	-	8.87	266	177	-	-	443	-	-	**887**	**4,434**
47DR012	6.97	-	-	6.97	209	139	-	-	348	-	-	**697**	**3,483**
47DR013	16.00	-	7.55	8.45	480	320	-	755	422	-	1,887	**3,864**	**19,319**
47DR014	3.20	-	0.61	2.60	96	64	-	61	130	-	152	**503**	**2,516**
47DR015	4.05	-	-	4.05	122	81	-	-	203	-	-	**405**	**2,027**
47DR016	1.66	-	-	1.66	50	33	-	-	83	-	-	**166**	**830**
47DR017	1.34	-	-	1.34	40	27	-	-	67	-	-	**134**	**668**
47DR018	36.15	7.79	10.75	17.61	1,085	723	1,559	1,075	881	1,559	2,686	**9,566**	**47,832**
47DR019	8.70	-	-	8.70	261	174	-	-	435	-	-	**870**	**4,351**
47DR020	14.93	2.53	0.74	11.67	448	299	506	74	583	506	184	**2,599**	**12,996**
47DR021	3.95	-	-	3.95	118	79	-	-	197	-	-	**395**	**1,973**
47DR022	7.05	-	-	7.05	211	141	-	-	352	-	-	**705**	**3,524**
47DR023	0.58	0.58	-	-	17	12	116	-	-	116	-	**261**	**1,304**

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
47DR024	1.98	-	-	1.98	59	40	-	-	99	-	-	**198**	**989**
47DR025	50.75	46.13	1.49	3.13	1,522	1,015	9,225	149	156	9,225	373	**21,667**	**108,335**
47DR026	6.65	-	-	6.65	199	133	-	-	332	-	-	**665**	**3,324**
47DR027	4.14	-	-	4.14	124	83	-	-	207	-	-	**414**	**2,068**
47DR028	22.58	-	-	22.58	677	452	-	-	1,129	-	-	**2,258**	**11,290**
47DR029	3.73	-	-	3.73	112	75	-	-	186	-	-	**373**	**1,863**
47DR030	28.38	-	-	28.38	851	568	-	-	1,419	-	-	**2,838**	**14,188**
47DR031	2.82	-	-	2.82	85	56	-	-	141	-	-	**282**	**1,411**
47DR032	13.25	-	-	13.25	398	265	-	-	663	-	-	**1,325**	**6,626**
47DR033	1.07	-	-	1.07	32	21	-	-	54	-	-	**107**	**535**
47DR034	3.97	-	-	3.97	119	79	-	-	198	-	-	**397**	**1,983**
47DR035	14.59	-	-	14.59	438	292	-	-	729	-	-	**1,459**	**7,294**
47DR036	13.97	-	-	13.97	419	279	-	-	698	-	-	**1,397**	**6,985**
47DR037	16.91	-	-	16.91	507	338	-	-	845	-	-	**1,691**	**8,454**
47DR038	18.47	-	-	18.47	554	369	-	-	924	-	-	**1,847**	**9,237**
Total	**427.88**	**72.63**	**22.67**	**332.58**	**12,836**	**8,558**	**14,526**	**2,267**	**16,629**	**14,526**	**5,666**	**75,009**	**375,045**

4.2 IMPROVEMENT

Costs of required improvement measures have been calculated using the following standard rates. These standard rates have been applied in 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	2,500
Gravelling	km	2,200,000
Blacktopping	km	5,700,000
Bridge construction	m	600,000
Slab culvert construction	m	250,000
CC Causeway construction	m	100,000
Stone Causeway construction	m	10,000
Pipe culvert placement	unit	150,000
Masonry wall construction	m^3	10,000
Gabion wall construction	m^3	4,000
Lined drain construction	m	1,000

The resulting estimated costs come to NPR 1843.188 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
47DR001	7.56	800	225	16,640	43,113	-	-	1,800	460	1,800	2,100	1,660	-	**68,599**
47DR002	25.72	-	813	56,578	-	-	7,500	9,800	1,390	4,350	8,150	5,300	-	**93,880**
47DR003	3.09	-	125	6,808	-	-	-	2,800	300	900	900	840	-	**12,673**
47DR004	3.92	-	138	8,623	-	-	-	-	200	900	1,430	1,760	-	**13,050**
47DR005	9.02	-	100	19,843	-	-	-	1,600	400	2,550	4,130	2,912	-	**31,535**
47DR006	6.19	80	238	13,626	-	-	-	1,800	470	1,500	630	720	-	**19,064**
47DR007	20.41	-	-	10,567	27,377	-	-	-	-	-	-	440	-	**38,384**
47DR008	20.99	-	575	42,812	-	18,000	-	5,400	760	4,200	3,400	4,440	-	**79,587**
47DR009	6.58	-	238	14,478	-	-	-	1,800	340	1,650	900	1,440	-	**20,845**
47DR010	7.70	-	225	16,949	-	-	-	800	510	1,800	2,260	1,680	-	**24,224**
47DR011	8.87	-	500	19,508	-	-	3,500	2,000	710	2,850	2,350	2,008	-	**33,426**
47DR012	6.97	-	-	15,325	-	-	-	1,600	320	1,050	1,310	2,160	-	**21,765**
47DR013	16.00	-	263	18,586	91,176	54,000	-	8,600	210	3,000	2,950	2,292	-	**181,076**
47DR014	3.20	-	-	5,711	-	-	-	-	250	600	-	120	-	**6,681**

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
47DR015	4.05	-	263	8,921	-	-	-	-	310	1,350	1,580	720	-	**13,143**
47DR016	1.66	-	188	3,653	-	-	1,500	-	130	750	-	-	-	**6,221**
47DR017	1.34	-	-	2,940	7,617	-	-	-	210	300	-	-	-	**11,068**
47DR018	36.15	-	175	38,752	161,653	-	10,000	1,000	1,040	5,400	3,980	4,400	398	**226,797**
47DR019	8.70	-	338	19,146	-	24,000	-	1,800	840	2,550	2,330	1,520	-	**52,524**
47DR020	14.93	-	200	25,665	70,702	-	-	1,800	550	2,100	900	1,192	-	**103,109**
47DR021	3.95	-	-	8,683	-	-	-	800	280	1,350	400	480	-	**11,993**
47DR022	7.05	-	138	15,504	-	-	-	-	480	1,200	-	300	-	**17,621**
47DR023	0.58	-	-	-	-	-	-	-	-	-	-	-	-	**-**
47DR024	1.98	-	-	4,353	-	-	-	800	120	600	750	600	-	**7,223**
47DR025	50.75	-	75	6,879	26,336	-	2,500	-	80	750	-	720	-	**37,341**
47DR026	6.65	-	-	14,625	-	-	4,000	2,200	590	1,950	600	780	-	**24,745**
47DR027	4.14	-	75	9,099	-	-	-	-	530	750	-	500	-	**10,954**
47DR028	22.58	-	1,000	49,674	-	-	-	4,000	2,700	6,150	2,700	2,912	-	**69,136**
47DR029	3.73	-	138	8,198	-	-	-	1,200	670	1,350	-	252	-	**11,808**

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
47DR030	28.38	-	850	62,429	-	48,000	7,500	5,400	1,490	7,050	7,410	7,040	-	**147,169**
47DR031	2.82	-	200	6,209	-	-	-	-	330	750	-	1,200	-	**8,689**
47DR032	13.25	-	400	29,155	-	24,000	1,500	1,800	1,280	4,200	4,430	3,680	-	**70,445**
47DR033	1.07	-	-	2,354	-	-	-	-	-	150	-	-	-	**2,504**
47DR034	3.97	-	213	8,727	-	24,000	3,250	1,800	180	1,350	2,760	1,660	-	**43,940**
47DR035	14.59	-	388	32,094	83,153	-	2,500	3,600	780	4,650	2,850	2,100	-	**132,115**
47DR036	13.97	-	925	30,732	-	-	2,500	2,600	480	1,950	3,600	2,952	-	**45,739**
47DR037	16.91	-	700	37,198	-	30,000	8,750	-	1,490	5,100	2,800	2,992	-	**89,030**
47DR038	18.47	-	1,875	40,641	-	-	2,000	-	780	3,900	2,530	3,360	-	**55,086**
Total	**427.88**	**880**	**11,575**	**731,685**	**511,128**	**222,000**	**57,000**	**66,800**	**21,660**	**82,800**	**70,130**	**67,132**	**398**	**1,843,188**

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)
Opening up	km	4,000,000
Gravelling	km	2,200,000
Bridge construction	m	600,000

Existing 3 DRCN to be extended up to VDC centers by 8.83 km new construction of these roads for linking with district headquarters. The resulting estimated costs for new construction come to NPR 54.746 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)
47DR011	Dumre-Bhaisikatta-Wangsurung	3.06	12,240	6,732	-	**18,972**
47DR019	Charchare-Koldanda	0.26	1,040	572	-	**1,612**
47DR027	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	5.51	22,040	12,122	-	**34,162**
Total		**8.83**	**35,320**	**19,426**	**-**	**54,746**

4.4 DTPP COSTS

Total costs for the District Transport Perspective Plan come to NPR 1964 million as indicated in the table below.

Table 4.4.1 DTPP Costs (NPR '000)

Code	Conservation	Improvement	New construction	Total
47DR001	3,782	68,599	-	72,381
47DR002	12,859	93,880	-	106,739
47DR003	1,547	12,673	-	14,221
47DR004	1,960	13,050	-	15,010
47DR005	4,510	31,535	-	36,045
47DR006	3,097	19,064	-	22,160
47DR007	37,514	38,384	-	75,898
47DR008	12,793	79,587	-	92,380
47DR009	3,290	20,845	-	24,136
47DR010	3,852	24,224	-	28,076
47DR011	4,434	33,426	18,972	56,831
47DR012	3,483	21,765	-	25,248
47DR013	19,319	181,076	-	200,395
47DR014	2,516	6,681	-	9,196
47DR015	2,027	13,143	-	15,171
47DR016	830	6,221	-	7,051

Code	Conservation	Improvement	New construction	Total
47DR017	668	11,068	-	11,736
47DR018	47,832	226,797	-	274,630
47DR019	4,351	52,524	1,612	58,487
47DR020	12,996	103,109	-	116,105
47DR021	1,973	11,993	-	13,966
47DR022	3,524	17,621	-	21,145
47DR023	1,304	-	-	1,304
47DR024	989	7,223	-	8,212
47DR025	108,335	37,341	-	145,676
47DR026	3,324	24,745	-	28,069
47DR027	2,068	10,954	34,162	47,184
47DR028	11,290	69,136	-	80,425
47DR029	1,863	11,808	-	13,671
47DR030	14,188	147,169	-	161,357
47DR031	1,411	8,689	-	10,101
47DR032	6,626	70,445	-	77,071
47DR033	535	2,504	-	3,039
47DR034	1,983	43,940	-	45,923
47DR035	7,294	132,115	-	139,409
47DR036	6,985	45,739	-	52,724
47DR037	8,454	89,030	-	97,484
47DR038	9,237	55,086	-	64,323
Total	**375,045**	**1,843,188**	**54,746**	**2,272,979**

5. RANKING

Ranking of required interventions determine the priority for implementation. The ranking is done separately for conservation, improvement and new construction. Ranking is done according to cost per person served, whereby the costs are estimated costs of the previous chapter. Population served is calculated using population data for VDCs linked by particular road given in **Annex 3**.

5.1 CONSERVATION

Ranking of roads for conservation is done in basis of total conservation costs per person served by the road. This ranking of roads will be updated each year in the AAMP 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)
47DR017	1.34	40	27	-	-	67	-	-	134	3,700	36
47DR024	1.98	59	40	-	-	99	-	-	198	4,925	40
47DR016	1.66	50	33	-	-	83	-	-	166	3,595	46
47DR027	4.14	124	83	-	-	207	-	-	414	4,740	87
47DR001	7.56	227	151	-	-	378	-	-	756	7,820	97
47DR029	3.73	112	75	-	-	186	-	-	373	3,465	108
47DR023	0.58	17	12	116	-	-	116	-	261	2,320	112
47DR010	7.70	231	154	-	-	385	-	-	770	6,235	124
47DR009	6.58	197	132	-	-	329	-	-	658	5,295	124
47DR015	4.05	122	81	-	-	203	-	-	405	3,240	125
47DR004	3.92	118	78	-	-	196	-	-	392	2,965	132
47DR020	14.93	448	299	506	74	583	506	184	2,599	16,685	156
47DR034	3.97	119	79	-	-	198	-	-	397	2,510	158
47DR022	7.05	211	141	-	-	352	-	-	705	4,255	166
47DR014	3.20	96	64	-	61	130	-	152	503	2,840	177
47DR006	6.19	186	124	-	-	310	-	-	619	3,475	178
47DR003	3.09	93	62	-	-	155	-	-	309	1,560	198
47DR012	6.97	209	139	-	-	348	-	-	697	3,445	202
47DR032	13.25	398	265	-	-	663	-	-	1,325	6,035	220
47DR011	8.87	266	177	-	-	443	-	-	887	3,670	242
47DR002	25.72	772	514	-	-	1,286	-	-	2,572	10,260	251
47DR005	9.02	271	180	-	-	451	-	-	902	3,545	254
47DR026	6.65	199	133	-	-	332	-	-	665	2,545	261
47DR038	18.47	554	369	-	-	924	-	-	1,847	6,660	277
47DR021	3.95	118	79	-	-	197	-	-	395	1,300	304
47DR035	14.59	438	292	-	-	729	-	-	1,459	4,595	317
47DR028	22.58	677	452	-	-	1,129	-	-	2,258	6,925	326
47DR018	36.15	1,08	723	1,559	1,075	881	1,55	2,686	9,566	28,425	337
47DR037	16.91	507	338	-	-	845	-	-	1,691	4,480	377
47DR008	20.99	630	420	-	153	973	-	383	2,559	5,195	493
47DR019	8.70	261	174	-	-	435	-	-	870	1,730	503
47DR030	28.38	851	568	-	-	1,419	-	-	2,838	5,360	529
47DR025	50.75	1,52	1,0	9,225	149	156	9,22	373	21,667	40,755	532
47DR007	20.41	612	408	3,121	-	240	3,12	-	7,503	12,725	590

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)
47DR013	16.00	1,08	320	-	755	422	-	1,887	3,864	6,205	623
47DR036	13.97	419	279	-	-	698	-	-	1,397	2,100	665
47DR033	1.07	32	21	-	-	54	-	-	107	-	Municipal
47DR031	2.82	85	56	-	-	141	-	-	282	-	Municipal

Allocation of maintenance funding will follow a specific sequence indicated below, and will be applied to the road ranking as defined in the AAMP. This is importance and be followed accordingly where fund 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 done in 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)	Total cost (NPR '000)*	Population served	Cost/person (NPR)
47DR023	0.58	-	2,320	-
47DR025	50.75	11,004	40,755	270
47DR007	20.41	11,007	12,725	865
47DR017	1.34	3,450	3,700	932
47DR024	1.98	7,223	4,925	1,467
47DR016	1.66	6,221	3,595	1,730
47DR020	14.93	32,407	16,685	1,942
47DR018	36.15	65,145	28,425	2,292
47DR027	4.14	10,954	4,740	2,311
47DR014	3.20	6,681	2,840	2,352
47DR001	7.56	25,485	7,820	3,259
47DR029	3.73	11,808	3,465	3,408
47DR010	7.70	24,224	6,235	3,885
47DR009	6.58	20,845	5,295	3,937
47DR015	4.05	13,143	3,240	4,057
47DR022	7.05	17,621	4,255	4,141
47DR004	3.92	13,050	2,965	4,401

Code	Total length (km)	Total cost (NPR '000)*	Population served	Cost/person (NPR)
47DR006	6.19	19,064	3,475	5,486
47DR012	6.97	21,765	3,445	6,318
47DR003	3.09	12,673	1,560	8,124
47DR038	18.47	55,086	6,660	8,271
47DR005	9.02	31,535	3,545	8,896
47DR011	8.87	33,426	3,670	9,108
47DR002	25.72	93,880	10,260	9,150
47DR021	3.95	11,993	1,300	9,225
47DR026	6.65	24,745	2,545	9,723
47DR028	22.58	69,136	6,925	9,984
47DR035	14.59	48,962	4,595	10,655
47DR032	13.25	70,445	6,035	11,673
47DR013	16.00	89,900	6,205	14,488
47DR008	20.99	79,587	5,195	15,320
47DR034	3.97	43,940	2,510	17,506
47DR037	16.91	89,030	4,480	19,873
47DR036	13.97	45,739	2,100	21,781
47DR030	28.38	147,169	5,360	27,457
47DR019	8.70	52,524	1,730	30,361
47DR033	1.07	2,504	-	Municipal road
47DR031	2.82	8,689	-	Municipal road

* Phase 1: Earth to gravel standard ** Phase 2: Gravel to blacktop standard

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 result of ranking is given 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)
47DR019	0.26	1,612	1,730	932
47DR011	3.06	18,972	3,670	5,169
47DR027	5.51	34,162	4,740	7,207

6. DISTRICT TRANSPORT MASTER PLAN (DTMP)

Based upon the prioritized transport linkages and the projected financial plan, first five year District Transport Master Plan (DTMP) indicating the year-wise target has been prepared. Various categories of interventions such as Conservation, Improvement and New construction for roads have been prepared and presented in this report.

6.1 FIVE YEAR PROJECTED FINANCIAL RESOURCES

Major sources of funding to rural road network development are mainly the DDC development grant, DDC's own resources, DoLIDAR support, GoN's grant and support from other donor agencies. While preparing the financial plan, current available financial resources from various agencies and assuming 10% annual growth on this was considered and this is then projected for the next five years to prepare the First Five-year Financial Plan as presented in table 6.1.1.

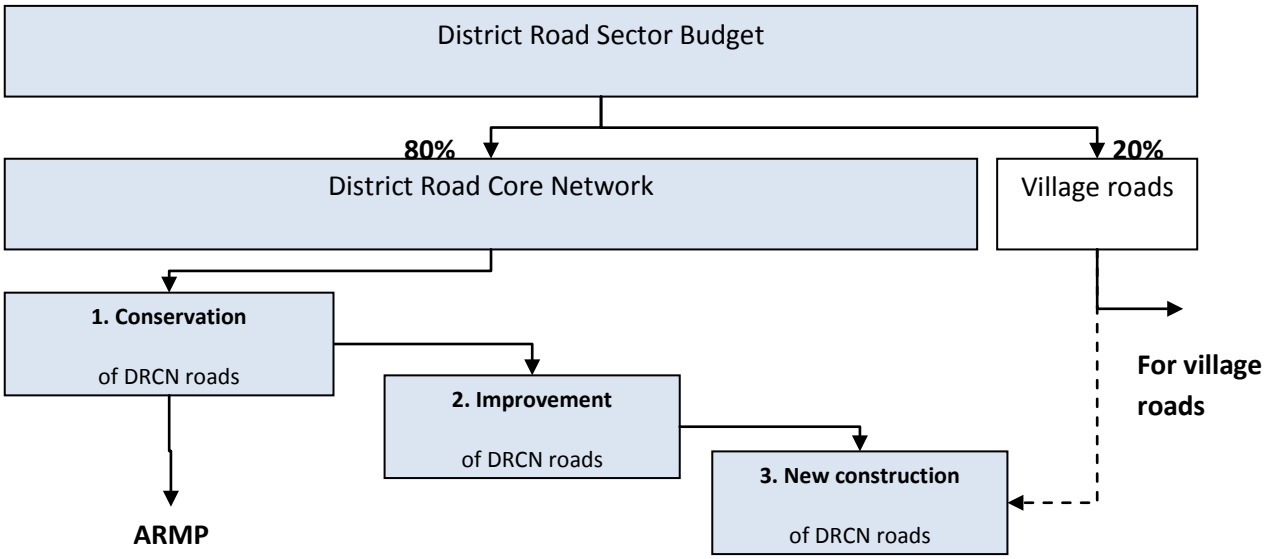
Table 6.1.1 Estimated funding levels (roads) for next five years (in NPR '000)

Funding source	2071/72	2072/73	2073/74	2074/75	2075/76
DDC Capital Grant	9,300	10,230	11,253	12,378	13,616
Local Transport Infrastructure Sectorwide Program	15,800	17,380	19,118	21,030	23,133
Roads Board Nepal	5,000	5,500	6,050	6,655	7,321
SNRTP (RAIDP)	120,000	132,000	145,200	159,720	175,692
Local Road Bridge Project	15,660	17,226	18,949	20,843	22,928
Local Level Grant to Road	7,000	7,700	8,470	9,317	10,249
People's Participation Based Development Program	15,000	16,500	18,150	19,965	21,962
local Infrastructure Area program	3,500	3,850	4,235	4,659	5,124
Total	**191,260**	**210,386**	**231,425**	**254,567**	**280,024**
Grand Total	**1,167,661**				

6.2 BUDGET ALLOCATION

Distribution of available district road sector budget is indicated in the figure below. 80% of total budget is allocated for the District Road Core Network. Remaining 20% budget can be used by the DDC for village roads, giving priority to emergency maintenance then routine/recurrent maintenance. Alternatively, this 20% may be used for the new construction of DRCN roads where this is considered a priority by the district. The DRCN budget is primarily allocated to conservation and surplus of this is then allocated to improvement. There is not sufficient budget for improvement of all DRCN of Palpa so, no budget is remains for new construction.

Figure 5 : District Road Sector Budget Allocation



Based on distribution of the estimated budget, the available annual budget for each intervention type and the resulting district road core network length by surface type can be calculated. The results are shown in the following table. Budget allocation to some roads for improvement is not possible due to the various reasons however, they are ranked on top.

Table 6.2.1 Investment Plan

Item	Year				
Fiscal year	2071/72	2072/73	2073/74	2074/75	2075/76
Total budget	191,260	210,386	231,425	254,567	280,024
Village roads	38,252	42,077	46,285	50,913	56,005
Core road network budget (DTMP)	**153,008**	**168,309**	**185,140**	**203,654**	**224,019**
Core network length (km)	**427.88**	**427.88**	**427.88**	**427.88**	**427.88**
Blacktop (km)	72.63	82.33	91.59	104.30	119.07
Gravel (km)	22.67	21.17	24.32	20.85	15.25
Earthen (km)	332.58	324.38	311.97	302.73	293.56
Conservation	**75,009**	**77,955**	**82,140**	**85,548**	**89,039**
Emergency	12,836	12,836	12,836	12,836	12,836
Routine	8,558	8,558	8,558	8,558	8,558
Recurrent (blacktop)	14,526	16,466	18,317	20,860	23,814
Recurrent (gravel)	2,267	2,117	2,432	2,085	1,525
Recurrent (earthen)	16,629	16,219	15,599	15,137	14,678
Periodic (blacktop)	14,526	16,466	18,317	20,860	23,814
Periodic (gravel)	5,666	5,293	6,081	5,213	3,814

Item				Year														
Fiscal year				2071/72			2072/73			2073/74			2074/75			2075/76		
Improvement	Cost	BT	GR	77,999	BT	GR	90,354	BT	GR	102,999	BT	GR	118,105	BT	GR	134,980	BT	GR
47DR023	-	-	-		-	-		-	-		-	-		-	-		-	-
47DR025	37,341	4.62	3.13	37,341	4.62	3.13		-	-		-	-		-	-		-	-
47DR007	38,384	4.80	4.80	38,384	4.80	4.80		-	-		-	-		-	-		-	-
47DR017	11,068	1.34	1.34	2,274	0.27	0.27	8,794	1.06	1.06		-	-		-	-		-	-
47DR024	7,223	-	1.98		-	-	7,223	-	1.98	-	-	-	-	-	-	-	-	-
47DR016	6,221	-	1.66		-	-	6,221	-	1.66	-	-	-		-	-		-	-
47DR020	103,109	12.40	11.67		-	-	68,117	8.19	7.71	34,992	4.21	3.96	-	-	-	-	-	-
47DR018	226,797	28.36	17.61		-	-		-	-	68,007	8.50	5.28	118,105	14.77	9.17	40,685	5.09	3.16
47DR027	10,954	-	4.14		-	-		-	-		-	-		-	-	10,954	-	4.14
47DR014	6,681	-	2.60		-	-		-	-		-	-		-	-	6,681	-	2.60
47DR001	68,599	7.56	7.56		-	-		-	-		-	-		-	-	68,599	7.56	7.56
47DR029	11,808	-	3.73		-	-		-	-		-	-		-	-	8,061	-	2.54
47DR010	24,224	-	7.70		-	-		-	-		-	-		-	-		-	-
47DR009	20,845	-	6.58		-	-		-	-		-	-		-	-		-	-
47DR015	13,143	-	4.05		-	-		-	-		-	-		-	-		-	-
47DR022	17,621	-	7.05		-	-		-	-		-	-		-	-		-	-
47DR004	13,050	-	3.92		-	-		-	-		-	-		-	-		-	-
47DR006	19,064	-	6.19		-	-		-	-		-	-		-	-		-	-
47DR012	21,765	-	6.97		-	-		-	-		-	-		-	-		-	-
47DR003	12,673	-	3.09		-	-		-	-		-	-		-	-		-	-
47DR038	55,086	-	18.47		-	-		-	-		-	-		-	-		-	-
47DR005	31,535	-	9.02		-	-		-	-		-	-		-	-		-	-
47DR011	33,426	-	8.87		-	-		-	-		-	-		-	-		-	-
47DR002	93,880	-	25.72								-	-		-	-		-	-
47DR021	11,993	-	3.95											-	-		-	-
47DR026	24,745	-	6.65											-	-		-	-
47DR028	69,136	-	22.58											-	-		-	-
47DR035	132,115	14.59	14.59														-	-

47DR032	70,445	-	13.25														-	-
47DR013	181,076	16.00	8.45															
47DR008	79,587	-	19.46															
47DR034	43,940	-	3.97															
47DR037	89,030	-	16.91															
47DR036	45,739	-	13.97															
47DR030	147,169	-	28.38															
47DR019	52,524	-	8.70															
47DR033	2,504	-	1.07															
47DR031	8,689	-	2.82															
Total improvement				**77,999**	**9.70**	**8.20**	**90,354**	**9.26**	**12.41**	**102,999**	**12.71**	**9.24**	**118,105**	**14.77**	**9.17**	**134,980**	**12.65**	**20.00**

6.3 DTMP OUTPUTS

Based on the investment plan presented above, all DRCN roads will be conserved for the duration of DTMP implementation. Further 59.03 km will be improved to gravel standard and 59.09 km will be improved as blacktop standard of top ranked 12 DRCN roads. All of these roads will also receive the cross drainage and protective structures required to make them maintainable all-weather roads. Remaining 273.56 km of earthen roads at the end of the DTMP period will be improved in the next DTMP. Same way new construction will only take place after the existing DRCN roads have been improved to maintainable all weather standard. Some of these roads could be constructed using VDC funding allocated as 20% of total DTMP Budget as per the need of district.After this DTMP, the resulting road status in the district will be 131.72 km blacktopped, 22.67 km, gravelled and earthen surface remains to 273.56 km.

Table 6.3.1 DTMP output

Conservation	Improvement gravel	Improvement blacktop	New construction
427.88	59.03	59.09	-

Out of the total DTMP budget, NPR409.692 million will be spent on conservation and NPR524.436 million on improvement. The DTMP budget will spendin entireperiod of five-year.

6.4 DTMP OUTCOME

As a result of the activities planned in the DTMP, the percentage of all-weather maintainable DRCN roads increases by 36% from 95.03km to 154.32km and 64% (273.56km) leftovers as fair weather.

Table 6.4.1 Standard of DRCN roads

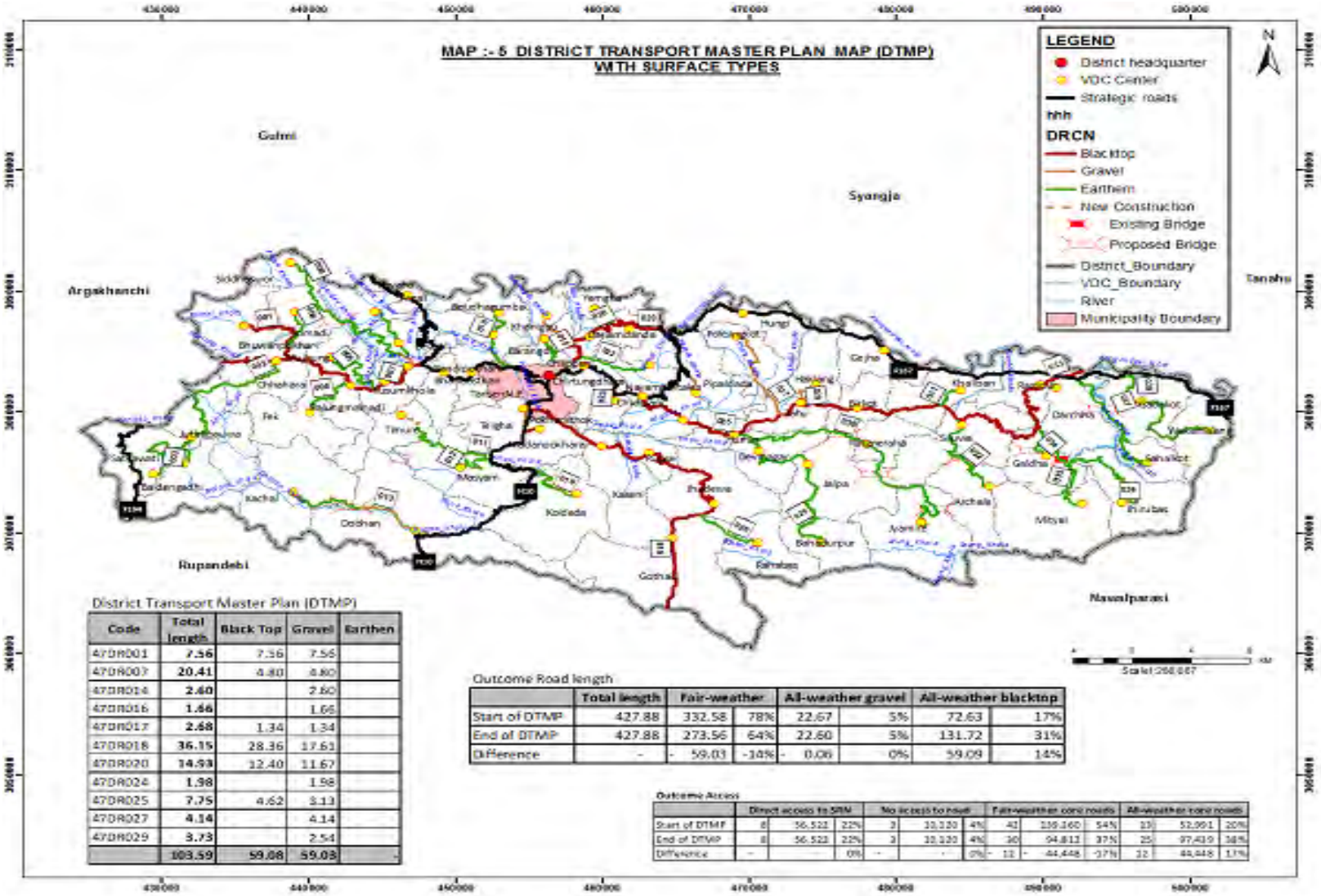
	Total length	Fair-weather		All-weather gravel		All-weather blacktop	
	km	km	%	km	%	km	%
Start of DTMP	427.88	332.58	78	22.67	5	72.63	17
End of DTMP	427.88	273.56	64	22.60	5	131.72	31
Difference	-	- 59.03	-14	- 0.06	0	59.09	14

The number of VDC headquarters with access to the SRN or all-weather DRCN roads will increase from21 to 33 and the district population with access to the SRN or all-weather DRCN roads will increase from 42% to 71%. The number of VDC headquarters with no access to DRCN roads will remain at 3, while the percentage of the district population with no access to DRCN roads will remain at 4%.

Table 6.4.2 Population with access to road network

	Direct access to SRN			No access to DRCN			Access to Fair-weather DRCN roads			Access to All-weather DRCN roads		
	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%
Start of DTMP	8	56,522	22	3	10,120	4	42	139,260	54	13	52,991	20
End of DTMP	8	56,522	22	3	10,120	4	30	94,812	37	25	97,439	38
Difference	-	-	0	-	-	0	-12	-44,448	-17	12	44,448	17

Figure 6 : District Transport Master Plan (DTMP)



District Transport Master Plan (DTMP)

Code	Total length	Black Top	Gravel	Earthen
47DR001	7.56	7.56	7.56	
47DR007	20.41	4.80	4.80	
47DR014	2.60		2.60	
47DR016	1.66		1.66	
47DR017	2.68	1.34	1.34	
47DR018	36.15	28.36	17.61	
47DR020	14.93	12.40	11.67	
47DR024	1.98		1.98	
47DR025	7.75	4.62	3.13	
47DR027	4.14		4.14	
47DR029	3.73		2.54	
	103.59	59.08	59.08	-

Outcome Road length

	Total length	Fair-weather		All-weather gravel		All-weather blacktop	
Start of DTMP	427.88	332.58	78%	22.67	5%	72.63	17%
End of DTMP	427.88	273.56	64%	22.60	5%	131.72	31%
Difference	-	- 59.03	-14%	- 0.06	0%	59.09	14%

Outcome Access

	Direct access to SRN			No access to road			Fair-weather core roads			All-weather core roads		
Start of DTMP	8	56,522	22%	3	10,120	4%	42	139,160	54%	19	52,991	20%
End of DTMP	8	56,522	22%	3	10,120	4%	30	94,813	37%	25	97,439	38%
Difference	-	-	0%	-	-	0%	- 12	- 44,448	-17%	12	44,448	17%

ANNEX 1 GIS FILE PROJECTION AND COORDINATE SYSTEM

GPS Setting

Grid: **Lat/Long hdd.ddd** and Datum **Indian Bangaladesh** and Unit in **metric** system has been considered in GPS during field survey. Garmin Etrex 30 GPS receiver was used in GPS field survey.

Defining the coordinate systems and reprojecting data in ArcGIS

We can define a coordinate system for data using the following options in ArcGIS using the Define Projection tool in the Data Management toolbox. If the data has a coordinate system definition, but it does not match the typical coordinate system used by an organization, we can reproject the data using the Project tool in the Data Management toolbox. We need to use the corresponding projection parameters while defining the coordinate system or reprojecting the data.

Projection and coordinate System used in GIS Shape file

- Projection type: Conformal (preserving shape)
- Projected coordinate system: Transverse Mercator
- Parameters of the coordinate system:
- *False_Easting: 500000*
- *False_Northing: 0*
- *Central_Meridian: 84 for Central of Nepal*
- *Scale_Factor: 0.9999*
- *Latitude_Of_Origin: 0*
- *Spheroid: Everest 1830*
- Associated Geographic Coordinate System: *Everest-India and Nepal.prj* under *Asia*

ANNEX 2 TRAFFIC DATA

Code	Description	Total length (km)	Motor -cycle	Car-Jeep-Minibus	Tractor	Truck -Bus	PCU	VPD
47DR001	Amalabas-Pelabas-Bhuwanpokhari VDC	7.56	25	8	13	2	**55**	**23**
47DR002	Chhahara-Juthapauwa-Satyabati	25.72	15	8	12	0	**40**	**20**
47DR003	Satyabati-Baldenggadhi	3.09	6	0	0	0	**3**	**-**
47DR004	Dhajabanne-Somadi VDC	3.92	30	8	10	0	**43**	**18**
47DR005	Kusumkhola-Mainadi-Mujhung VDC	9.02	25	7	8	0	**36**	**15**
47DR006	Batase-Pheka	6.19	10	6	10	0	**31**	**16**
47DR007	Harthok-Chhahara-Tingire	20.41	130	40	40	6	**209**	**86**
47DR008	Khaseuli-Deurali-Siddheshwor VDC	20.99	10	4	12	0	**33**	**16**
47DR009	Deurali-Khyaha	6.58	15	12	10	0	**40**	**22**
47DR010	Batasedanda-Bauwaghuma	7.70	32	12	10	0	**48**	**22**
47DR011	Dumre-Bhaisikatta-Wangsurung	8.87	12	4	8	0	**26**	**12**
47DR012	Dumre-Masyam	6.97	30	5	8	0	**36**	**13**
47DR013	Dovan-Kachal	16.00	10	6	10	20	**111**	**36**
47DR014	Bulthake-Khanigaun	3.20	10	8	9	1	**35**	**18**
47DR015	Tansen Ring road-Barangdi VDC	4.05	10	6	0	0	**11**	**6**
47DR016	Brindaban-Telgha VDC	1.66	25	4	8	0	**33**	**12**
47DR017	Nayapati-Madanpokhara VDC	1.34	45	5	10	1	**52**	**16**
47DR018	Bastari-Jhadewa-Gothadi-Khaireni	36.15	40	10	12	4	**70**	**26**
47DR019	Charchare-Koldanda	8.70	0	0	0	0	**-**	**-**
47DR020	Chilangdi-Chappani-Grahandanda-Ramdi	14.93	30	20	12	2	**67**	**34**
47DR021	Maulibhanjyang-Gunga-Mijare	3.95	10	8	4	0	**21**	**12**
47DR022	Chilangdi-Bagnas-Nayarchautari-Khanichhap	7.05	20	10	8	0	**36**	**18**
47DR023	Dharampani-Pokharathok VDC	0.58	30	4	8	0	**35**	**12**
47DR024	Lasune-Khokhola	1.98	10	3	8	0	**24**	**11**
47DR025	Aryabhanjyang-Rampur-Keladi	50.75	150	70	35	25	**315**	**130**
47DR026	Jhadewa-Rahabas	6.65	18	4	8	2	**37**	**14**
47DR027	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	4.14	10	4	6	0	**21**	**10**
47DR028	Humin-Devinagar-Jalpa-Bahadurpur	22.58	10	8	10	0	**33**	**18**
47DR029	Serkabas-Heklang	3.73	9	3	8	0	**24**	**11**
47DR030	Humin-Ringneraha-Jyamire	28.38	15	6	8	2	**38**	**16**
47DR031	Barbhanjyang-Khaliban	2.82	20	4	8	3	**42**	**15**
47DR032	Siluwa-Archale	13.25	15	6	12	0	**38**	**18**
47DR033	Bejhadh-Darchha	1.07	35	9	5	2	**45**	**16**
47DR034	Beldanda-Galdhaphant-Kathaidanda	3.97	10	2	4	0	**15**	**6**
47DR035	Beldanda-Dhunganabesi-Mityal	14.59	20	6	12	3	**52**	**21**
47DR036	Dhunganabensi-Kyangrung-Jhirubas	13.97	5	2	5	0	**15**	**7**
47DR037	Khoptar-Kirtipur-Panthe-Sahalkot	16.91	20	7	10	2	**45**	**19**
47DR038	Bhalayatar-Phurkechaur-Anandibhanjyang-Bakamalang	18.47	25	6	12	0	**43**	**18**
Total		**427.88**						

ANNEX 3 POPULATION SERVED

#	VDC/municipality	Population	Road																																						
			47DR001	47DR002	47DR003	47DR004	47DR005	47DR006	47DR007	47DR008	47DR009	47DR010	47DR011	47DR012	47DR013	47DR014	47DR015	47DR016	47DR017	47DR018	47DR019	47DR020	47DR021	47DR022	47DR023	47DR024	47DR025	47DR026	47DR027	47DR028	47DR029	47DR030	47DR031	47DR032	47DR033	47DR034	47DR035	47DR036	47DR037	47DR038	SRN
1	Archale	2545																																X							
2	Argali	3393																																							X
3	Baugha Gumba	1690										X																													
4	Bahadurpur	2043																												X											
5	Baldengadhi	2463		X	X																																				
6	Bandipokhara	2351																																							X
7	Barangdi	2211															X					X																			
8	Bhairabsthan	5408																																							X
9	Bhuwanpokhari	3640	X																																						
10	Birkot	2568																									X														
11	Bodhapokharathok	2155										X																													
12	Chappani	2075														X						X																			
13	Chhahara	4798	X	X		X			X																																
14	Chidipani	4171																				X					X														
15	Chirtungdhara	4266																						X																	X
16	Darchha	7565																									X								X				X		
17	Darlamdada	2097																				X	X																		
18	Deurali	2324								X	X																														
19	Devinagar	2989																												X		X									
20	Dobhan	6872													X																										
21	Fek	2972						X																																	
22	Foksingkot	3733																											X												
23	Gadakot	5127																																					X	X	
24	Galdha	3824																									X									X	X	X			
25	Gejha	5277																																							X
26	Gothadi	4558																		X								X													
27	Heklang	3124																									X				X										
28	Humin	2436																									X			X											
29	Hungi	4579																																							X
30	Jalpa	3160																												X		X									
31	Jhadewa	4536																		X																					
32	Jhirubas	3127																																				X			
33	Juthapauwa	3440		X																																					
34	Jyamire	3754																														X									
35	Kachal	3699													X																										

#	VDC/municipality	Population	Road																																							
			47DR001	47DR002	47DR003	47DR004	47DR005	47DR006	47DR007	47DR008	47DR009	47DR010	47DR011	47DR012	47DR013	47DR014	47DR015	47DR016	47DR017	47DR018	47DR019	47DR020	47DR021	47DR022	47DR023	47DR024	47DR025	47DR026	47DR027	47DR028	47DR029	47DR030	47DR031	47DR032	47DR033	47DR034	47DR035	47DR036	47DR037	47DR038	SRN
36	Kaseni	5697																		X	X																				
37	Khaliban	5912																									X						X								
38	Khanichhap	2094																						X																	
39	Khanigau	1881														X						X																			
40	Khasyoli	2131							X	X																															
41	Khyaha	2334									X																														
42	Koldada	3865																			X																				
43	Kusumkhola	1624					X		X																																
44	Madanpokhara	6281											X	X					X	X																					
45	Masyam	4649											X	X							X																				
46	Mityal	4409																																			X				
47	Mujhung	2147					X		X																																
48	Nayarnamtales	2153																						X			X														X
49	Palung Mainadi	2652					X	X	X																																
50	Pipaldada	5084																								X															
51	Pokharathok	2208																							X																
52	Rahabas	2287																										X													
53	Rampur	11515																									X								X						
54	Ringneraha	2498																														X									
55	Rupse	2078																		X																					
56	Sahalkot	1988																																					X		
57	Satyawati	3165		X	X																																				
58	Siddheshwor	2744								X																															
59	Siluwa	4988																									X							X							
60	Somadi	2724				X				X																															
61	Tanhu	3548																									X		X		X										
62	Tansen NP	29095										X					X																								X
63	Telgha	3113																X																							
64	Timure (kha)	2522											X																												
65	Wakamalang	2964																																						X	
66	Yamgha	3573																				X	X																		
	Total population	**258,893**	7,820	10,260	1,560	2,965	3,545	3,475	12,725	5,195	5,295	6,235	3,670	3,445	6,205	2,840	3,240	3,595	3,700	28,425	1,730	16,685	1,300	4,255	2,320	4,925	40,755	2,545	4,740	6,925	3,465	5,360	-	6,035	-	2,510	4,595	2,100	4,480	6,660	56,522
	Total VDCs/municipalit	**66**	**2**	**4**	**2**	**2**	**3**	**2**	**5**	**4**	**2**	**3**	**3**	**2**	**2**	**2**	**2**	**1**	**1**	**5**	**3**	**6**	**2**	**3**	**1**	**1**	**11**	**2**	**2**	**4**	**2**	**4**	**1**	**2**	**2**	**1**	**2**	**2**	**3**	**2**	**8**

ANNEX 4 LOCATION OF PROPOSED INTERVENTIONS

Road code	Road Name	Length (km)	Start chainage (km) or X-coordinate	End chainage (km) or Y-coordinate	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)
47DR001	Amalabas-Pelabas-Bhuwanpokhari VDC	7.5638			1	7.6	7.6	90.0	0.0	0.0	18.0	46.0	12.0	210.0	415.0	0.0
47DR002	Chhahara-Juthapauwa-Satyabati	25.717			0	25.7	0.0	325.0	0.0	30.0	98.0	139.0	29.0	815.0	1325.0	0.0
47DR003	Satyabati-Baldenggadhi	3.0948			0	3.1	0.0	50.0	0.0	0.0	28.0	30.0	6.0	90.0	210.0	0.0
47DR004	Dhajabanne-Somadi VDC	3.9195			0	3.9	0.0	55.0	0.0	0.0	0.0	20.0	6.0	143.0	440.0	0.0
47DR005	Kusumkhola-Mainadi-Mujhung VDC	9.0196			0	9.0	0.0	40.0	0.0	0.0	16.0	40.0	17.0	413.0	728.0	0.0
47DR006	Batase-Pheka	6.1937			0.1	6.2	0.0	95.0	0.0	0.0	18.0	47.0	10.0	63.0	180.0	0.0
47DR007	Harthok-Chhahara-Tingire	20.409			0	4.8	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	110.0	0.0
47DR008	Khaseuli-Deurali-Siddheshwor VDC	20.992			0	19.5	0.0	230.0	30.0	0.0	54.0	76.0	28.0	340.0	1110.0	0.0
47DR009	Deurali-Khyaha	6.5809			0	6.6	0.0	95.0	0.0	0.0	18.0	34.0	11.0	90.0	360.0	0.0
47DR010	Batasedanda-Bauwaghuma	7.704			0	7.7	0.0	90.0	0.0	0.0	8.0	51.0	12.0	226.0	420.0	0.0
47DR011	Dumre-Bhaisikatta-Wangsurung	8.8671			0	8.9	0.0	200.0	0.0	14.0	20.0	71.0	19.0	235.0	502.0	0.0
47DR012	Dumre-Masyam	6.9658			0	7.0	0.0	0.0	0.0	0.0	16.0	32.0	7.0	131.0	540.0	0.0
47DR013	Dovan-Kachal	15.996			0	8.4	16.0	105.0	90.0	0.0	86.0	21.0	20.0	295.0	573.0	0.0
47DR014	Bulthake-Khanigaun	3.2045			0	2.6	0.0	0.0	0.0	0.0	0.0	25.0	4.0	0.0	30.0	0.0
47DR015	Tansen Ring road-Barangdi VDC	4.055			0	4.1	0.0	105.0	0.0	0.0	0.0	31.0	9.0	158.0	180.0	0.0
47DR016	Brindaban-Telgha VDC	1.6605			0	1.7	0.0	75.0	0.0	6.0	0.0	13.0	5.0	0.0	0.0	0.0
47DR017	Nayapati-Madanpokhara VDC	1.3364			0	1.3	1.3	0.0	0.0	0.0	0.0	21.0	2.0	0.0	0.0	0.0
47DR018	Bastari-Jhadewa-Gothadi-Khaireni	36.153			0	17.6	28.4	70.0	0.0	40.0	10.0	104.0	36.0	398.0	1100.0	398.0
47DR019	Charchare-Koldanda	8.7028			0	8.7	0.0	135.0	40.0	0.0	18.0	84.0	17.0	233.0	380.0	0.0
47DR020	Chilangdi-Chappani-Grahandanda-Ramdi	14.932			0	11.7	12.4	80.0	0.0	0.0	18.0	55.0	14.0	90.0	298.0	0.0

Road	Road Name	Length (km)	Gorge (km)	Corridor (km)	Stabilization	Shelling	Kot opening	Bridge (m)	Culvert	Causeway	Causeway	Lvert	Ary wall	Nwall	Drain
47DR021	Maulibhanjyang-Gunga-Mijare	3.9468			0	3.9	0.0	0.0	0.0	0.0	8.0	28.0	9.0	40.0	120.0	0.0
47DR022	Chilangdi-Bagnas-Nayarchautari-Khanichhap	7.0472			0	7.0	0.0	55.0	0.0	0.0	0.0	48.0	8.0	0.0	75.0	0.0
47DR023	Dharampani-Pokharathok VDC	0.5795			0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47DR024	Lasune-Khokhola	1.9786			0	2.0	0.0	0.0	0.0	0.0	8.0	12.0	4.0	75.0	150.0	0.0
47DR025	Aryabhanjyang-Rampur-Keladi	50.747			0	3.1	4.6	30.0	0.0	10.0	0.0	8.0	5.0	0.0	180.0	0.0
47DR026	Jhadewa-Rahabas	6.6479			0	6.6	0.0	0.0	0.0	16.0	22.0	59.0	13.0	60.0	195.0	398.0
47DR027	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	4.136			0	4.1	0.0	30.0	0.0	0.0	0.0	53.0	5.0	0.0	125.0	0.0
47DR028	Humin-Devinagar-Jalpa-Bahadurpur	22.579			0	22.6	0.0	400.0	0.0	0.0	40.0	270.0	41.0	270.0	728.0	0.0
47DR029	Serkabas-Heklang	3.7264			0	3.7	0.0	55.0	0.0	0.0	12.0	67.0	9.0	0.0	63.0	0.0
47DR030	Humin-Ringneraha-Jyamire	28.377			0	28.4	0.0	340.0	80.0	30.0	54.0	149.0	47.0	741.0	1760.0	0.0
47DR031	Barbhanjyang-Khaliban	2.8225			0	2.8	0.0	80.0	0.0	0.0	0.0	33.0	5.0	0.0	300.0	0.0
47DR032	Siluwa-Archale	13.252			0	13.3	0.0	160.0	40.0	6.0	18.0	128.0	28.0	443.0	920.0	0.0
47DR033	Bejhadh-Darchha	1.07			0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
47DR034	Beldanda-Galdhaphant-Kathaidanda	3.967			0	4.0	0.0	85.0	40.0	13.0	18.0	18.0	9.0	276.0	415.0	0.0
47DR035	Beldanda-Dhunganabesi-Mityal	14.588			0	14.6	14.6	155.0	0.0	10.0	36.0	78.0	31.0	285.0	525.0	0.0
47DR036	Dhunganabensi-Kyangrung-Jhirubas	13.969			0	14.0	0.0	370.0	0.0	10.0	26.0	48.0	13.0	360.0	738.0	0.0
47DR037	Khoptar-Kirtipur-Panthe-Sahalkot	16.908			0	16.9	0.0	280.0	50.0	35.0	0.0	149.0	34.0	280.0	748.0	0.0
47DR038	Bhalayatar-Phurkechaur-Anandibhanjyang-Bakamalang	18.473			0	18.5	0.0	750.0	0.0	8.0	0.0	78.0	26.0	253.0	840.0	0.0
	Total	**410.19**			**1.10**	**332.58**	**89.67**	**4630**	**370**	**228**	**668**	**2166**	**552**	**7013**	**16783**	**398**

ANNEX 5 OVERALL ROAD INVENTORY

Road code	Road Name	Length (km)	Start chainage (km) or XY-coordinate	End chainage (km) or XY-coordinate	Surface Type: Black Top	Surface Type : Gravel	Surface Type : Earth	All Weather	Fair Weather	Conditiom - Good/ Fair	Condition - Poor	Condition - Temporarily Impassable	Condition - Permanently Impassable
47DR001	Amalabas-Pelabas-Bhuwanpokhari VDC	7.56					√		√	√		√	
47DR002	Chhahara-Juthapauwa-Satyabati	25.72					√		√		√	√	
47DR003	Satyabati-Baldenggadhi	3.09					√		√	√		√	
47DR004	Dhajabanne-Somadi VDC	3.92					√		√	√		√	
47DR005	Kusumkhola-Mainadi-Mujhung VDC	9.02					√		√	√		√	
47DR006	Batase-Pheka	6.19					√		√	√		√	
47DR007	Harthok-Chhahara-Tingire	20.41			√			√		√			
47DR008	Khaseuli-Deurali-Siddheshwor VDC	20.99					√		√	√		√	
47DR009	Deurali-Khyaha	6.58					√		√	√		√	
47DR010	Batasedanda-Bauwaghuma	7.70			√			√		√			
47DR011	Dumre-Bhaisikatta-Wangsurung	8.87					√		√	√		√	
47DR012	Dumre-Masyam	6.97					√		√		√	√	
47DR013	Dovan-Kachal	16.00					√		√	√		√	
47DR014	Bulthake-Khanigaun	3.20					√		√	√			
47DR015	Tansen Ring road-Barangdi VDC	4.05					√		√	√		√	
47DR016	Brindaban-Telgha VDC	1.66					√		√	√		√	
47DR017	Nayapati-Madanpokhara VDC	1.34					√		√	√		√	
47DR018	Bastari-Jhadewa-Gothadi-Khaireni	36.15					√		√	√			
47DR019	Charchare-Koldanda	8.70					√		√	√		√	
47DR020	Chilangdi-Chappani-Grahandanda-Ramdi	14.93					√		√	√			
47DR021	Maulibhanjyang-Gunga-Mijare	3.95					√		√	√			
47DR022	Chilangdi-Bagnas-Nayarchautari-Khanichhap	7.05					√		√	√			√
47DR023	Dharampani-Pokharathok VDC	0.58					√		√	√		√	

Road code	Road Name	Length (km)	dinate	coordinate	Black Top	Gravel	Earth	Weather	Weather	d/ Fair	n - Poor	Impassable	tly Impassable
47DR024	Lasune-Khokhola	1.98			√			√		√			
47DR025	Aryabhanjyang-Rampur-Keladi	50.75					√		√	√			
47DR026	Jhadewa-Rahabas	6.65					√		√	√		√	
47DR027	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	4.14					√		√	√		√	
47DR028	Humin-Devinagar-Jalpa-Bahadurpur	22.58					√		√	√		√	
47DR029	Serkabas-Heklang	3.73					√		√		√	√	
47DR030	Humin-Ringneraha-Jyamire	28.38					√		√	√		√	
47DR031	Barbhanjyang-Khaliban	2.82					√		√	√		√	
47DR032	Siluwa-Archale	13.25					√		√		√	√	
47DR033	Bejhadh-Darchha	1.07					√		√		√	√	
47DR034	Beldanda-Galdhaphant-Kathaidanda	3.97					√		√	√		√	
47DR035	Beldanda-Dhunganabesi-Mityal	14.59					√	√		√			
47DR036	Dhunganabensi-Kyangrung-Jhirubas	13.97					√		√		√	√	
47DR037	Khoptar-Kirtipur-Panthe-Sahalkot	16.91					√		√		√	√	
47DR038	Bhalayatar-Phurkechaur-Anandibhanjyang-Bakamalang	18.47					√		√		√	√	
VR													
47VR001	Bhuwanpokhari-Talpokhara-Arghakhanchi	12.06					√		√				√
47VR002	Argali Ranighat Ramdi-Pipaldanda - Genjha -Rampur-	7.14					√		√			√	
47VR003	Aryabhanjyang-Chaupari (Khanichhap)	12.07					√		√				√
47VR004	Barbhanjyang-Ratamata	7.19					√		√			√	
47VR005	Batase-Palung-Lumbas-Budhikot- Kachal	11.44					√		√			√	
47VR006	Bhalebas-Chhap-Pipaldanda-Kokal	4.74					√		√				√
47VR007	Bhuwanpokhari (Pelabas)-Balgha-Arghakhanchi	5.53					√		√			√	
47VR008	Birkot-Geja	4.91					√		√			√	
47VR009	Khanigaun(Deurali)-Dailatung	5.62					√		√			√	
47VR010	Dhajabanne-Tansingal-Sardewa	8.52					√		√			√	
47VR011	Chharaha-Dagil-Harianp-Arghakhanchi	4.80					√		√			√	
47VR012	Chuchebari-Madanpokhara- (Bahunkhola)	1.59					√		√			√	
47VR013	Deurali-Arkhaldanda-Hattilek-Purbakhola	4.99					√		√				√
47VR014	Dhowadi-Marsidanda-Khokkhola	4.74					√		√			√	

Road code	Road Name	Length (km)	dinate	coordinate	Black Top	: Gravel	: Earth	Weather	Weather	d/ Fair	n - Poor	Impassable	tly Impassable
47VR015	Dumre-Rajawai-Harthok	7.64					√		√				√
47VR016	Gobarbandi-Satyawati-Jagat (Gothadi)	14.28					√		√			√	
47VR017	Hatiya(Bhairabsthan)-Bharkot	3.30					√		√			√	
47VR018	Holandi-Setipokhari-Dhungakhani (Tansen-Tamghas	1.82					√		√				√
47VR019	Humin-Bagchaur-Kharebas-Tari	11.07					√		√			√	
47VR020	Jabgadi-Lamdikhola-Arkhaldanda-Purbakhola	20.32					√		√				√
47VR021	Jhigamara-Ratamata-Chahala-Juthapauwa	20.55					√		√			√	
47VR022	Jhumsa-Jyamire-Damar-Jagat	20.40					√		√			√	
47VR023	Jhumsa-Masyam (Hatiya)	5.64					√		√			√	
47VR024	Keladi-Rajghara-Sitakunda-Dhunganabensi	9.62					√		√				√
47VR025	Khadar-Dundada-Husikot-Nawalparasi	5.44					√		√				√
47VR026	Khahare-Bhedabari-Buddhikot	3.26					√		√			√	
47VR027	Khaliban-Jabgadi-Bhangere-Gejha-Hosdi	7.17					√		√			√	
47VR028	Deurali-Manabhag	6.63					√		√				√
47VR029	Khokakhola-Chidipani-Phedidohora	4.90					√		√			√	
47VR030	Khyaha-Dammak	3.67					√		√		√		
47VR031	Khokhola-Ombhanjyang	12.25					√		√		√		
47VR032	Baughapokharathok-Birpokhara-Jorte	7.42					√		√				√
47VR033	Pakluwa-Gorsad-Bahakhok Phedi (Madi phat Ring road)	7.92					√		√			√	
47VR034	Saljhandi-Juthapauwa-Sunguredhunga	5.63					√		√				√
47VR035	Mityal-Arungkhola	20.06					√		√			√	
47VR036	Jagat-Bhutuke-Mahalpokhari-(Sunawal)	9.78					√		√		√		
47VR037	Jagat-Hyakbari-Thansing	6.99					√		√				√
47VR038	Jalpa VDC Road	0.32					√		√			√	
47VR039	Madanpokhara-Tinpiple-Amlihan	6.45					√		√			√	
47VR040	Manbhag-Arsaudi-Amile-Pharsatakura	11.66					√		√			√	
47VR041	Masyam-Jantilung-Marambot-Patal-Kerabari	11.89					√		√				√
47VR042	Maulibhanjyang-Dansinga	3.03					√		√				√
47VR043	Mauwadada-Amdada-Abal	6.17					√		√			√	
47VR044	Mehaldhap-Salledhar-Tindhare-Arghakhanchi-Panena	3.61					√		√				√

Road code	Road Name	Length (km)	dinate	coordinate	Black Top	: Gravel	: Earth	Weather	Weather	d/ Fair	n - Poor	Impassable	tly Impassable
47VR045	Meldhara-Ghorbanda	2.83					√		√				√
47VR046	Mityal-Jhirubas VDC	4.82					√		√			√	
47VR047	Nayapati-Damkada	4.23					√		√			√	
47VR048	Parbas-Tinpiple-Jukiya-Bohkhar	7.69					√		√			√	
47VR049	Pipaldada-Jheskang-Namtaha-Titeni	3.80					√		√		√		
47VR050	Raika-Anandibhanjyang-Rupsebhanjyang	12.14					√		√			√	
47VR051	Raksebhanjyang-Bhaluwa-Sahalkot	10.04					√		√				√
47VR052	Ranibagiya-Dahari Gaun	1.59					√		√			√	
47VR053	Sarahitar-Eklebar-Harnetar	9.27					√		√				√
47VR054	Sarai-Bahundada-Sarapkot-Olesh	10.25					√		√			√	
47VR055	Serkabas-Furungdi-Lame	6.43					√		√				√
47VR056	Setipokhari-Bokhar-Bhaluban	19.30					√		√			√	
47VR057	Syaulibazzar-Phurkechaur	5.49					√		√				√
47VR058	Tahu-Rambadevi(Tourist Way)	1.11					√		√			√	
47VR059	Barangdi VDC Bldg-Khanigaun-Kallabari-Tankichaur	5.67					√		√			√	
47VR060	Tansen(Batase)-Awal-Ranighat	12.64					√		√			√	
47VR061	Tokse-Lamdi-Shikhardanda-Mandran	7.48					√		√			√	
47VR062	Darunga-Darlamkali	5.56					√		√				√
47VR063	Debgir-Devinagar	5.71					√		√			√	
47VR064	Batase - Dhustung - Kachal	9.31					√		√				√
Total		**927.49**											

ANNEX 6 PHOTOGRAPH

Displaying Introduction and DRCN finalization Workshop Banner

DTO of Palpa delivering concluding remarks in Introduction and DRCN Finalization Workshop

Involvement of Participants in discussion session

Consultancy TL Presenting on Introduction and DRCN Finalization Workshop held on 2nd April, 2014 at DDC hall

Displaying DTMP finalization Workshop Banner

Consultancy TL Presenting on DTMP Finalization Workshop held on 30th October, 2014 at DDC

LDO of Palpa delivering concluding remarks in DTMP Final Workshop, held on 30th , October

Attention of participants at DTMP finalization workshop

Consultancy Engineer Collecting DRCN data and GPS tracking

Consultancy Engineer Collecting DRCN data and GPS tracking

ANNEX 7 MINUTES

आज मिति २०७०।१२।१९ गते बुधवारका दिन श्रीमान् स्थानीय विकास अधिकारी ज्यु को अध्यक्षतामा RTI SECTOR Maintenance Pilot (RAP3) – DOLIDAR को सहयोगमा यस पाल्पा जिल्लाको जिल्ला यातायात गुरु योजना (DTMP) तैयार गर्ने सिलसिलामा जि.वि.उ. पदाधिकारी DTICC का पदाधिकारी एवं अन्य सरोकारवाला हरुको सहभागितामा परिचयात्मक एवं जिल्ला सडक निर्धारण (DRCN Finalization) गोष्ठी जि.वि.स. पाल्पामा निम्न उपस्थितिमा तपशिलका निर्णय गरी सम्पन्न गरियो।

उपस्थिती

क्र.सं.	नाम थर	कार्यालय वा संस्था	पद	हस्ताक्षर
१.	दीर्घ बहादुर पोखरेल	जि.वि.स.	स्था.वि.अ.	
२	राधा कृष्ण कोइराला	[illegible]	[illegible]	
३	निरञ्जन श्रेष्ठाली	जिल्ला प्रशासन कार्यालय पाल्पा	स.प्र.जि.अ.	
४	महेन्द्रराज कोइराला	जि.कृ.वि.का.	व.कृ.वि.अ.	
५.	लोकनाथ (रामकोटे)	(ज.मु.ठ.इ.)	जि.मु.ठ.अ.	
६.	प्रकाश लम्साल	जिल्ला वन कार्यालय	जि.व.अ.	
७	पुष्कर गहराई	जि.वि.ए.	थो.अ.इ.अ.	
८.	दुर्गा व. लामाछोगी	"	व.का.अ.	
९	राम प्र. [illegible]	"	ई.	
१०	गणेश सुवेदी	जिल्ला शिक्षा कार्यालय	ई.	
११	राम प्रसाद श्रेष्ठाली	जि.वि.स.	स.इ.	
१२	कल्याण सिं पाण्डे	" "	"	
१३	इन्द्रमान पाण्डे	"	ई.	
१४	दिनेश राइली	अरुणोदय मे-पावर जि.	अध्यक्ष	
१५.	कृष्ण प्रसाद डंगेल	जि.वि.स.	इ.अधिकृत	
१६	कमला सागर पाण्डे	"	स.अ.वा.वी.इ.	
१७	राम प्रसाद भण्डे	"	ना.सु.	

क्र. सं.	नाम थर	कार्यालय वा संस्था	पद	हस्ताक्षर
१७	टिकाराम पाँडेय	जे.ए.ए महानिके	सदस्य	
१८	माधव प्र० अधिकारी	प.नि.वि.वय.सघ	प्रा.स.	
१९	विकास गहतराई	"	ब.का.स	
२०	राधेश्याम यादव	जि.प्रा.का.	स.इ.	
२१	[illegible]	मा प्रधा जोपका	सदस्य	
२२	[illegible]	जे.ए.ए. आयुक्त	सचिव	
२३	मातृका प्र० गौतम	[illegible]	[illegible]	
२४	गिर बहादुर थापा	नेकपा-माओवादी, पर्व	सह-इन्चार्ज	
२५	देवीप्रसाद बस्याल	नेकपा एमाले	का.प.अध्यक्ष	
२६	टोप बहादुर	राष्ट्रिय जनमुक्ति पार्टी	—	
२७	[illegible]	राष्ट्रिय जनमोर्चा	अध्यक्ष	
२८	वीर बहादुर राना	नेपाली कांग्रेस	सभापति	
२९	भीमदत्त पाँडे	जिल्ला प्रा.का.	प्रजिई	
३०	[illegible]	डि.वि.स.	ना.सु.	
३१	किशोर नेपाल	"	का.स.	
३२	बालकृष्ण पाण्डे	"		
३३	विष्णु प्रसाद [illegible]	जिलाविकास	[illegible]	
३४	रामेश्वर बमराल	पाल्या डिभिजन वन	[illegible]	
३५	भुवन के.सि.	जि.वि.स. पाल्या	लेखापाल	
३६	डुले बहादुर कुँवर	स.प्र.प.	अध्यक्ष	
३७	नरेन्द्र [illegible]	[illegible]	सचिव	
३८	तारा ब. खत्री	जि.वि.स		
३९	लिला घोषरे	" "	ख०	
४०	[illegible]	"	का.स	
४१	मधु गहतराई	"	का.स.	
४२	[illegible]	"	"	
४३	किरण बोहरा	पत्रका (महानिदेश पाल्या)	सचिव	
४४	देवराज घिमिरे	जि.प्र.का.	सव.इन्जि.	
४५	[illegible]	जी.वि.स.	[illegible]	
४६	रामजी बिस्ट	जी.वि.स.		
४७	सुरीता [illegible]	जी.वि.स.		

४९ कमला नि बी. नि. वि. प.

५० गीता गैपाल "

६१ कमल रावती "

६२ कृष्ण बहादुर थापा "

६३ गीन बहादुर बिष्ट "

६४ श्याम कार्की

६५) गिरिजीवी आचार्य नि.बी.प.

तिला

६६) रवड़ण ब. जि बि

६७) रविन्द्र वायमाजी

६८) कारिता रावल

निर्णयहरु :-

यस बैठकले प्रस्तावित सडकहरु मध्ये निम्न अनुसारका सडकहरुलाई मुख्य जिल्ला सडक (DRCN) को रुपमा हुनाँट गर्ने निर्णय गरियो

SN	Name of Road	Service To VDC Centre
1	Aryabhanjyang-Rampur	Chidipani, Birkot, Humin, Rampur, Tahu
2	Harthok-Chhahara VDC	Khasauli, Palungmainadi, Chhahara, Kusumkhola
3	Bastari-Jhadewa-Gothadi	Ghothadi, Jhadewa, Kaseni, Rupse
4	Chilangdi-Chappani-Garandada	Chappani, Darlamdanda
5	Humin-Ringneraha-Jyamire	Jyamire, Ringneraha
6	Batasedanda-Bauwaghuma	Bauwagumba, Baughapokharathok
7	Dovan-Kachal	Dovan, Kachal
8	Amalabas-Pelabas-Bhuwanpokhari VDC	Bhuwanpokhari
9	Tanhu-Ombhanjyang-Kiteni-Bhanjyangthok	Phoksingkot
10	Beldanda-Dhunganabesi-Mityal	Mityal
11	Khaseuli-Deurali-Siddheshwor VDC	Deurali, Siddheshwor
12	Bulthake-Khanigaun	Khanigaun
13	Dumre-Masyam	Masyam
14	Chhahara-Juthapauwa-Satyabati	Baldenggadhi, Jhuthapauwa
15	Humin-Devinagar-Jalpa-Bahadurpur	Bahadurpur, Devinagar, Jalpa
16	Siluwa-Archale	Siluwa, Archale
17	Dhajabanne-Somadi VDC	Somadi
18	Batase-Pheka	Phek
19	Serkabas-Heklang	Heklang
20	Jhadewa-Rahabas	Rahabas
21	Satyabati-Baldenggadhi	Satyabati
22	Khoptar-Kirtipur-Panthe-Sahalkot	Sahalkot
23	Chilangdi-Bagnas-Nayarchautari-Khanichhap	Khanichhap
24	Charchare-Koldanda	Koldanda
25	Bejhadh-Darchha	Darchha
26	Deurali-Khyaha	Khyaha
27	Beldanda-Galdhaphant-Kathaidanda	Galdha
28	Dumre-Bhaisikatta-Wangsurung	Thimure
29	Maulibhanjyang-Gunga-Mijare	Yamgha
30	Dhunganabensi-Kyangrung-Jhirubas	Jhirubas
31	Barbhanjyang-Khaliban	Khaliban
32	Tansen Ring road-Barangdi VDC	Barangdi
33	Kusumkhola-Mainadi-Mujhung VDC	Mujhung
34	Nayapati-Madanpokhara VDC	Madanpokhara
35	Dharampani-Pokharathok VDC	Pokharathok
36	Lasune-Khokhola	Pipaldanda
37	Brindaban-Telgha VDC	Telgha
38	Bhalayatar-Phurkechaur-Anandibhanjyang-Bakamalang	Gadakot, Bakamalang

☎ ०७५५२०४२४,५२०२७४,५२०९८३
फ्याक्स ०७५५२०२९२

नेपाल सरकार
संघीय मामिला तथा स्थानीय विकास मन्त्रालय
जिल्ला विकास समितिको कार्यालय
पाल्पा

मिति : २०७०।१२।२०

चनं. ५५८८
पत्र सं.

विषय : वैठकमा संचालन सम्वन्धमा ।

श्री स्थानीय पूर्वाधार विकास तथा कृषि सडक् विभाग
स्थानीय यातायात पूर्वाधार क्षेत्रगत कार्यक्रम
श्री महल पुल्चोक

मिति २०७०।१२।१२ चनं. ५१२ को पत्रसाथ मौजुदा जिल्ला यातायात गुरु योजना (DTMP) परिमार्जन गर्ने सम्वन्धमा जिल्ला सडक निर्धारण गेष्ठी (DRCN Finalization workshop) का लागि तहां वाट छनौट भई आएको North Star Engineering Consultant (P) Ltd को आयोजनामा पाल्पा जिल्लाका DRCC का सदस्य तथा अन्य सरोकारवालाहरुको उपस्थितीमा मिति २०७०।१२।१९ गते १(एक) दिने गोष्ठि सम्पन्न भएको व्यहोरा जानकारीको लागि अनुरोध छ ।

योजना, अनुगमन तथा तथ्यांक प्रमुख

श्री

आज मिति २०६७ साल कार्तिक १३ गतेका दिन श्रीमान् स्थानीय विकास अधिकारीज्यु को अध्यक्षतामा ग्रामीण पहुँच कार्यक्रम (RAP3) र स्थानीय यातायात पूर्वाधार क्षेत्रगत कार्यक्रम (RTI SWAP) को सहयोगमा यस पाल्पा जिल्लाको जिल्ला यातायात गुरुयोजना (DTMP) तयार गर्ने सिलसिलामा अन्तिम चरणको गोष्ठी जि. वि. स. पदाधिकारीहरु, जिल्ला सडक समन्वय समिति (DRCC), राजनीतिक दलका प्रमुख एवं प्रतिनिधिहरु, पत्रकारहरु र अन्य सरोकार संस्थाका प्रतिनिधिहरुको निम्न उपस्थितिमा संचालन भै तपशिल बमोजिमको निर्णयहरु गरियो।

उपस्थिती

क्र. सं.	नाम थर	कार्यालय/संघ संस्था	पद	हस्ताक्षर
१.	कृष्ण प्रसाद पाण्डे	जि. वि. स., पाल्पा	स्था. वि. अ.	
२	हरि प्रसाद नेपाल	सदस्य - संविधान सभा		
३	राधा कृष्ण कटेल	संविधान सभा	सदस्य	
४	प्रेमराज वरयाल	जि. वि. स. पूर्व सभापति		
५	माधव बहादुर रामाली	पूर्व सांसद	नेकपा (एमाले)	
६.	विशाल हर्लाकी	एमाले नवोदया	अध्यक्ष	
७	डुल बहादुर कुँवर	रा० प्र० पा०	अध्यक्ष	
८	वीर बहादुर (गि)	नेपाली कांग्रेस	सभापति	
९	देवी प्रसाद वल्याल	नेकपा एमाले	का. अध्यक्ष	
१०.	जितेन्द्र राउल	अखण्ड ने. पा.	जि. अध्यक्ष	
११	भीष राज तिमिल्सिना	डॉ. ए. ए. आयुर्वेद पाल्पा	अध्यक्ष	
१२.	राजेश कुमार अधिकारी	नेपाल पत्रकार महासंघ	अध्यक्ष	
१३	धनराज पौडेल	नेकपा माले	सदस्य	
१४	दे लक्ष्य क्षत्री	रा प्र पा नेपाल	उपाध्यक्ष	
१५	गिर बहादुर थापा	नेकपा - माओवादी, पाल्पा	सह. सेक्रेटरी	
१६.	[illegible]	प. सि. वि. डि. नं. ३, पाल्पा	सब इन्जिनियर	

क्र. सं.	नाम थर	कार्यालय/संस्था	पद	हस्ताक्षर
१७	राम प्रसाद साह	जि. वि. स.	इन्जिनियर	
१८	दिपक कुँवर	SNRTP-ILO	DRME	
१९	अमृत महर्जन	DTO.	इन्जिनियर	
२०	राम प्रसाद श्रेष्ठ	जि. वि. स.	सब इन्जीनियर	
२१	श्याम कुमार श्रेष्ठ	DTO	Sub Er	
२२	लोक प्रसाद पाँडेय	जिविक	जि. शा. वि.	
२३	महेन्द्र जी. सी.	सर्व सभापति जिविकसंघ		
२४	राजेन्द्र कोइराला	ज. कृ. वि. का.	व. कृ. वि. अ.	
२५	भीमार्जुन पाण्डे	प्रजिई, जिप्रका		
२६	विनोद सेपाल	का. अ. जि. वि. स	का. अ.	
२७	गोपाल रावाली	सब इन्जि DDC	सि. इ.	
२८	गिरिप्रसाद आचार्य	जि. वि. स.	लेखापाल	
२९	यादव प्रसाद न्यौपाने	"	वरिष्ठ लेखा अधिकृत	
३०	कृष्ण जि. सी.	"	लेखा अधिकृत	
३१	पुनारायण बस्याल	जि. पु. का.	इन्जिनियर	
३२	तारा क. रक्ज	जि. वि. स.	खरिदार	
३३	राम प्रसाद पाँडे	"	ना. सु.	
३४	शिव आचार्य	"	ना. सु.	
३५	बुद्धि शर्मा [illegible]	एकीकृत (माओवादी)	[illegible]	
३६	महेश्वर तिमिल्सेना	जि. वि. स	का. स	
३७	बालबहादुर [illegible]	"	"	
३८	विष्णु प्रसाद [illegible]	प. वि. प्र. का. नं. २ [illegible]	इन्जिनियर	
३९	पंकज गिरी	"	इन्जिनियर	
४०	विष्णु प्र. खनाल	जि. वि. स.	ना. सु.	
४१	लिला प्र. घिमिरे	" "	खरीदार	
४२	मिन ब. विष्ट	" "	क. ग.	
४३	राम्जी ब. विष्ट	" "	का. ग.	
४४	एक ब. गाहा	" "	" "	
४५	मधु महर्जन	" "	" "	
४६	[illegible] ब. थापा	" "	व. का. अ.	
४७	प्रकाश लम्सल	जि. वि. का.	जि. वि. अ.	
४८	कमला जि. सी.	जि. वि. स.	स. प.	

४S टिकाराम पौडेल जि.वि.स आ.ले.प सहायक

निर्णयहरु :

निर्णय नं.१ : यस बैठकले DRCN मा परेका सबै सडकहरुलाई प्रत्येक वर्ष मर्मत सम्भार गर्ने र प्राथमिकताक्रम अनुसार DRCN मा परेका सडकहरु लाई स्तरोन्नती गर्दै जाने निर्णय गरियो।

निर्णय नं.२: DRCN मा समावेस भिन्न ४ वटा सडकहरु अन्तर जिल्ला जोड्ने महत्वपुर्ण सडकहरु भएकोले त सडकहरु लाई जिल्लाको सिमानासम्म विस्तार गरी नामकरण पनि सोहि अनुसार गर्ने निर्णय गरियो।

47DR025 आर्यभञ्ज्याङ -रामपुर सडक लाई केलादी सम्म
47DR007 हार्पोक -हुहरा लाई तिरागिरे सम्म
47DR020 चिलाङ्दी - चापगाउँ -ग्रहणडाडा लाई राम्दी सम्म
47DR018 बांसटारी -झडेवा -गोठादी सडक लाई खैरेनी सम्म

निर्णय नं.३ : जिल्ला यातायात गुरु योजनामा प्रस्तावित कुल बजेटको ८०% रकम DRCN सडकहरुको लागि र बाकि २०% बजेट Village Road को लागि छुट्याउने निर्णय गरियो।

निर्णय नं.४ जिल्ला यातायात गुरु योजनाको ५ वर्षको अनुमानीत बजेट भन्दा अधिक बजेट जिल्लामा प्राप्त हुन आएमा प्राथमिकताक्रम अनुसार अन्य DRCN का सडकहरु पनि क्रमश स्तरोन्नती गर्दै जाने निर्णय गरियो

स्थानीय विकास अधिकारी

नेपाल सरकार
संघीय मामिला तथा स्थानीय विकास मन्त्रालय
जिल्ला विकास समितिको कार्यालय, पाल्पा

क्रमश :

निर्णय नं.५ : केन्द्रिय स्तर बाट समेत बजेट विनियोजन हुने आएका जिल्लाका महत्वपूर्ण क्षेत्रिय सडकहरु लाई सूचिकृत गरि DTMP Report मा सन्दर्भ सूचिमा समावेश गर्ने निर्णय गरियो।

निर्णय नं.६ : यस गोष्ठीले परामर्शदाता नर्थ स्टार इन्जिनियरिङ कन्सल्टेन्टद्वारा प्रस्तुत DTMP रिपोर्ट पारित गर्ने निर्णय गरियो।

प्रमुख जिल्ला विकास अधिकारी

नेपाल सरकार
प्रदेश मामिला तथा स्थानीय विकास मन्त्रालय
जिल्ला विकास समितिको कार्यालय, धनुषा

नेपाल सरकार

☎ ०७५-५२०४२४,२७४,९८३

संघिय मामिला तथा स्थानीय विकास मन्त्रालय

जिल्ला विकास समितिको कार्यालय

पाल्पा

प.सं. :

च.नं. : २६७

मिति : २०७१।०७।१४

विषय :- **जिल्ला यातायात गुरुयोजना (DTMP) पारित गरिएको बारे ।**

स्थानीय पूर्वाधार विकास तथा कृषि सडक विभाग (DoLIDAR)

स्थानीय यातायात पूर्वाधार विकास क्षेत्रगत कार्यक्रम

श्रीमहल, पुल्चोक, ललितपूर

उपरोक्त संबन्धमा, Rural Access Program (RAP3)/DoLIDAR को सहयोगमा **जिल्ला यातायात गुरुयोजना** परिमार्जन गर्ने सिलसिलामा पहिलो चरणको गोष्ठी मार्फत जिल्लामा भएका मौजुदा सडकहरुबाट District Road Core Network (DRCN) पहिचान भई ती सडकहरुको Data collection गरी परामर्शदातबाट प्राप्त हुन आएको Draft Final Report माथि गरिएको comment समावेस गरी मिति २०७१/७/१३ मा सम्पन्न अन्तिम चरणको गोष्ठी द्वारा जिल्ला यातायात गुरुयोजना (DTMP) पारित भएको जानकारी गरिन्छ ।

२९/६/१४

कृष्ण प्रसाद पाण्डे

(स्थानीय बिकास.अधिकारी)

स्थानीय विकास अधिकारी

बोधार्थ:

Rural Access Program (RAP3)

नर्थ स्टार ईन्जिनियरिङ कन्सल्टेन्ट