Rural Municipal Transport Master Plan

Ghyanglekh Rural Municipality

Office of the Rural Municipal Executive

Hayutar, Sindhuli

Bagmati Province, Nepal

Ghyanglekh Rural Municiplity

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Rural Municipal Transport Master Plan (RMTMP)

PREPARED BY:

Embark Engineering Services Pvt. Ltd.

New Baneshwor-10, Kathmandu

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Embark Engineering Services Pvt. Ltd.

New Baneshwor-10, Kathmandu

Acronyms/Abbreviations

DDC	District Development Committee
DTMP	District Transport Master Plan
GIS	Geographic Information System
GPS	Global Positioning System
IDPM	Indicative Development Potential Map
RMIM	Rural Municipality Road Inventory Map
RMRCC	Rural Municipality Road Coordination Committee
NMT	Non- Motorized Transport
RMTMP	Rural Municipal Transport Master Plan
RMTPP	Rural Municipal Transport Perspective Plan
VDC	Village Development Committee
MTPP	Municipal Transport Perspective Plan
PCU	Passenger Car Unit
DOLI	Department of Local Infrastructure Development
OD	Origin and Destination
ToR	Terms of Reference
HH	Household
VDCs	Village Development Committees
PT	Public Transport
Min.	Minute
Km.	Kilometre
Sq. km	Square Kilometre
Ha	Hectare

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Executive Summary

Transport facilities help in developing access with the urban linkages. Road accessibility can reduce isolation, stimulate crop production and marketing activities, encourage public services and help to transfer technology. Road building has been seen to bring about notable enthusiasm and visible changes in life. Road infrastructure is considered as "the infrastructure for infrastructure". However, in the absence of notable criteria and rational guidelines, road construction may be carried out in adverse manner resulting in haphazard usage and wastage of limited resources. Rural Municipal Transport Master Plan (RMTMP) is prepared for assessing and planning the present road and transport infrastructures and facilities within the Rural Municipality and its surroundings.

Ghyanglekh Rural Municipality lies in Sindhuli district of Bagmati Province. In 12 March 2017, the government of Nepal implemented a new local administrative structure consisting of 753 local units. With this implementation of the new local administrative structure, VDCs have been replaced with the Municipal and Rural Municipal councils.

The Ghyanglekh Rural Municipality was established by merging the Amale (1-9), Bastipur (1-9), Tamajor (1-9), Netrakali (1-9) and Shanteshwori (1-9) Village Development Committees (VDCs) having a total area of **166.77 sq. kms**. After merging the five VDCs' population it had a total population of **13,661** according to 2011 Nepal census. The population density of Ghyanglekh Rural Municipality is **81.92 person/sq.km**. Ghyanglekh Rural Municipality has altogether 5 wards.

RMTMP started with the formation of Rural Municipal Road Coordination Committee (RMRCC) and the collection of demand and inventory of road within the Rural Municipality. For the collection of existing road infrastructure data, GPS survey was used and total length of road surveyed was **316.55 KMs**. Based on field survey, ward no. 4 has highest length of roads and ward no. 2 has smallest road length among all wards.

Indicative Development Potential Plan is prepared showing the existing and potential market center/service centers (key growth centers) and the areas having various development potentials such as agro-based industries, high value cash crops and tourism. This city may be developed as the agricultural-cultural-historical centre and with promoting this, the tourism

can be improved. By improving the agriculture and tourism sector we have to develop the health, education and environment of the people of this Rural Municipality.

This study formulated the road hierarchy for the various roads namely Class A, B, C and D. Class C and D basically deals with access while Class A and B basically deal with mobility and accessibility to higher services. The minimum right of way, setback, pavement width and footpath width provisions for the different classes of roads are recommended as follows:

SN	Road Class	Min RoW(m)	Setback(m)	Pavement Width(m)
1	A	14/20	1.5/3	11/14
2	B	10	1.5	7
3	C	8	1.5	5.5
4	D	6	1.5	3.75

The total lengths of Class A, B, C and D roads are summarized as shown in the table below:

Class	Road Surface/Approx. Length (Km)				
	Concrete	Earthen	Gravelled	New Track	Grand Total
A	-	63.15	19.83	6.89	89.86
B	0.05	78.45	-	18.43	96.93
C	-	52.29	-	4.52	56.81
D	0.03	102.75	-	93.76	196.54
Grand Total	**0.09**	**296.64**	**19.83**	**123.59**	**440.14**

There are two district roads passing through this Rural Municipality which play important role for intra-Rural Municipality mobility as well as accessibility.

For the development of overall transportation infrastructures there is a need of approximately **1,564.26 crores** of budgets which in summary is as follows:

S. No.	Project	Required Capital
1	Upgrading all roads inside rural municipality with necessary infrastructures	10,900,082,342
2	Maintenance of all roads	4,671,471,000
3	Construction of Bus Park with bus terminal	20,000,000
4	Construction of Bus Stands (1 in each ward)	15,000,000
5	Construction of Helipad for emergency (1 in each ward)	15,000,000
6	Installation of traffic signals at 10 locations	15,000,000
7	Traffic Safety and Signs	3,000,000
8	Road Safety education	3,000,000
Total		**15,642,553,342**

However, the potential of Rural Municipality to invest in transportation infrastructure is **572.75 crore** Nepalese rupees (considering the capital of Rural Municipality increases by 10 percent each year) over twenty years period of time. The Rural Municipality needs to find sources for another **991.51 crore** Nepalese rupees for overall infrastructure development from different sources. The Rural Municipality should collaborate with federal government, province government and private sectors. Similarly, involving people in development works would help to generate revenue for infrastructure development. Likewise, Rural Municipality should increase their internal income through different income generating activities.

For the RMTMP period, the Rural Municipality aims to invest approximately **61.05 crores** of budget through Rural Municipality in road infrastructure construction in the next 5 fiscal years' period and this budget will increase on the years following. This capital is distributed for four classes of roads as follows:

Year	Capacity of Rural Municipality (in Thousands)					Sub Total
	Class A	Class B	Class C	Class D	Maintenance	
1	21,000	14,000	21,000	14,000	30,000	100,000
2	23,100	15,400	23,100	15,400	33,000	110,000
3	25,410	16,940	25,410	16,940	36,300	121,000
4	27,951	18,634	27,951	18,634	39,930	133,100
5	30,746	20,497	30,746	20,497	43,923	146,409
Total	**128,207**	**85,471**	**128,207**	**85,471**	**183,153**	**610,509**

The overall road network along with location points are shown in a interactive online map with satellite basemap. The details of the roads and locations can be obtained from the interactive map through the following link::

https://www.arcgis.com/apps/View/index.html?appid=4c2b73dec27d4cb9823e3655a8c2d8d8

For convenience, the above link has been shortened as::

https://www.tinyurl.com/Ghanglekhroads

(Both of the links redirect to the same map.)

Chapter 1: Introduction

1.1. Background

Life in organized human settlements, which are mostly referred to as communities, is only possible if people have mobility in daily basis. Residential area is spatially separated from workplaces, major shopping is concentrated in identifiable centers, and larger entertainment and relaxation facilities are found at specific locations. They have to have accessibility.

Transport facilities help in developing access with the urban linkages. Road accessibility can reduce isolation, stimulate crop production and marketing activities, encourage public services and help to transfer technology. Road construction has been seen to bring about notable enthusiasm and visible changes in life. Road infrastructure is considered as "the infrastructure for infrastructure". However, in the absence of notable criteria and rational guidelines, road construction is carried out in adverse manner resulting in haphazard use and wastage of limited resources.

Haphazard development of settlement in the urban and sub-urban area is a great problem which we have learned from the past earthquake. For disaster risk management and reducing the problem of congestion we should go for planned development. Construction of roads after the settlement is made or extension of road only after the congestion problem creates different types of problems in the society which we are closely observing from different metropolitan cities. In this regard, formulation of Rural Municipal Transport Master Plan was initiated for assessing the present road and transport infrastructures and facilities within the Rural Municipality and the surrounding Rural Municipalities. So as to be presented as proper Rural Municipality or a city, it must have a very good mobility and accessibility by public or private means of transportation.

1.2. Objective of RMTMP

The prime objective of this study is to prepare the Rural Municipal Transport Master Plan (RMTMP) for Ghyanglekh Rural Municipality. The planning approach is participatory and bottom-up from the settlement level. It will include a constructive plan to incorporate all the transportation needs and facilities for now and tomorrow. The specific objectives of the RMTMP are mentioned below:

1. Prepare the Rural Municipal Inventory Map (RMIM) of all road networks.
2. Identify the major road networks linking the Rural Municipality with the surrounding areas.
3. Collection of demands for new/rehabilitation transport linkages from Rural Municipalities/settlements based on city development plan.
4. Prepare the Perspective Plan of transport services and facilities (Rural Municipal Transport Perspective Plan)
5. Prepare physical and financial implementation plan of prioritized roads for the RMTMP period.
6. Prepare a five years Rural Municipal Transport Master Plan (RMTMP).

1.3. Scope and Limitation of RMTMP

The scope of this work and service the consultant will provide for the project is given below:

a. Analyze Mobility status of the Rural Municipality

   The consultant will also have conducted mobility study, incorporated in the O-D survey. This is important especially because the road network in capital has provided access to majority of the population. The question then arises on how efficiently, economically and safely the goods and passengers are transported, which is indicated by mobility.

b. Access the condition of public transportation

   The consultant will have collected data on different public transportation routes and their operation characteristics, which operate within the Rural Municipal area and to other adjoining area.

c. Prepare Rural Municipal Inventory Map (RMIM) of existing roads within Ghyanglekh Rural Municipality.

   The consultant will have prepared the Rural Municipality Inventory Map linking to strategic road networks such as national highways, district core road network, main trails and bridges. This shall be done by walkover surveys using enumerators. The inventory map shall include the road names, total length and breadth of the roads, surface type, existing condition, Right of way, vehicular traffic and pedestrian traffic flow etc.

d. Scoring criteria

The consultant will have developed scoring criteria to screen and prioritize all potential interventions for proper allocation of limited budget. Scoring and prioritization criteria shall be checked with all linkages and interventions and approved by the Rural Municipality.

e. Road classification and Nomenclature

The consultant shall have used metric system of nomenclature and apply the same classification throughout the data collection.

f. Preparation of perspective plan of interventions of services and facilities.

The data collected through accessibility survey, demand survey and inventory maps shall be used to prepare a perspective plan of interventions of services and facilities. All the identified interventions shall be screened and rated on the basis of approved criteria and forwarded to Rural Municipality council meetings. The final perspective plan shall be shown in GIS maps.

g. Prepare a realistic Physical and Financial Implementation Plan of Prioritised Roads for the RMTMP period

The consultant shall have collected information on the resources that can be spent on the construction or rehabilitation of transportation infrastructures by the Rural Municipality. The consultant may also carry out studies to project the resources to fund the transport infrastructures for the next five years. From the total projected resources, the consultant shall discuss with the Rural Municipality to find out the appropriate proportion to be spent on ongoing roads and new interventions proposed. The projected resources should be able to cope with the total number of roads and new interventions proposed.

h. Prepare Rural Municipal Transport Master Plan (RMTMP) of Ghyanglekh Rural Municipality

The consultant shall have prepared Rural Municipal Transport Master Plan (RMTMP) for Ghyanglekh Rural Municipality with due consideration to the existing situation of: vehicular parking, travel routes, modes of transport, etc and propose for future urban

growth. The consultant shall prepare a base scenario of the existing road and transport network and management based on the O-D survey and O-D matrix and prepare road inventory map and transport infrastructure network and management plan based on the travel demand forecast, population growth forecast, and growth rate of vehicular and transport infrastructure.

i. Prepare framework for medium term and long-term planning

The consultant shall also have forecasted the demand for medium term (10 years) and long term (20 years) and recommend a framework to guide future interventions and planning processes. The long-term plan shall consider the proposed East-West Railway and other major transport sector interventions in the long term.

1.4. Approach and Methodology

Roads are supposed to provide both access and mobility to all possible and potential areas. RMTMP will help to assist the planning of such roads to fulfil the stated objectives. Better planning is incomplete without relevant quality data and quality data can only be acquired by use of properly selected survey methods. The chapter deals with the methodological framework adopted for data collection covering all used survey method, sampling techniques, quality and quantity of data along with data processing, analysis and presentation methodology.

a. Approach:

Rural Municipal Transport Master Plan has been prepared using participatory bottom-up approach and differs from conventional practices of trickle-down approach. Techno-Political interface has been incorporated in the planning process, where active participation from representatives of political parties, line agencies, and Rural Municipality officials is crucial. The Rural Municipal Road Coordination Committee (RMRCC) has been constituted as authorized legislative body of Rural Municipality. This body, comprising all political parties' representatives and concerned technical officials, helps in necessary policy decisions during the RMTMP preparation and implementation process.

b. Methodological Framework:

The study started with preliminary planning or desk study where basic background of Rural Municipality is studied with help of secondary data including census data, GIS data. The study got acceleration with formation of RMRCC and inception report. Various field surveys were carried out with objective of collecting primary data on transportation network, trip characteristics and service facilities. Along with the primary data, demands for various transportation projects (construction/upgrading/maintenance) were obtained from each ward. Also, potential areas/locations for various facilities were also identified based on interaction with local people and RMRCC. The scoring criteria for prioritizing road network was identified based on ToR and will be approved by Rural Municipality. Then, the hierarchy of roads will be purposed and perspective plan of various interventions will be purposed and analysed based on available fund and finally physical and financial implementation plan of prioritized roads for RMTMP period. After analysis, the study will come up with potential roads, that need immediate intervention and roads that need to be given consideration for effective future planning.

All the above-mentioned strategy adopted for data collection, processing and analysis is summarized in the following figure in next page.

c. Secondary Data Collection

Any sorts of data that were collected from secondary sources are called secondary data. These data were collected from annual report published by district level offices and consultation with various concerned stakeholders. Rural Municipal Road Coordination Committee (RMRCC), which compromises people from various fields and political parties, is the next source for various secondary data. Field study was also carried out for general socio-economic assessment of the Rural Municipality that includes collection of data regarding high development potential areas such as extensive agriculture, horticulture, livestock farming, high value cash crops, cottage and agro-based industries, centre for business/commerce/markets places, tourism area, service centres (hospital, health post, agriculture service sub-centre etc.). The information about demographic data of Rural Municipality, various maps showing service centres, transport infrastructure inventory, past plans and sector study reports, sector standards and policy targets were collected from the secondary sources, which includes Bureau of Statistics, Survey Department, Local NGOs, line agencies, DDC, Rural Municipality etc. Digitized topographic maps, administrative

map of Rural Municipality, strategic road network map prepared by DoR, etc. were some other secondary data that were used during the study.

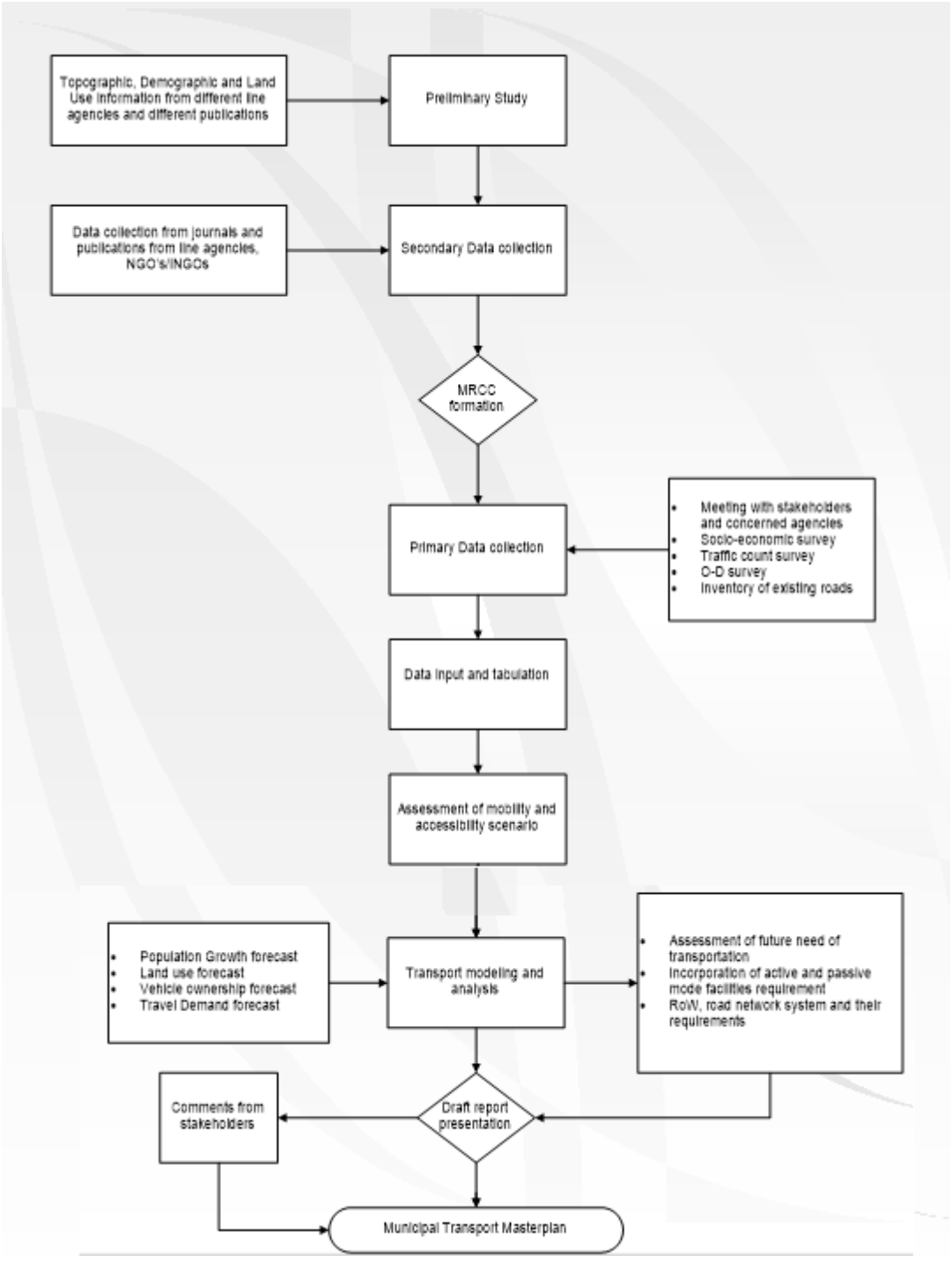


Figure 1: Methodological framework

d. Primary Data Collection:

Primary information on present household and trip characteristics, traffic characteristics, existing accessibility and mobility level of settlements, prioritized road network required for each ward are obtained via various reliable methods. Tracking of the existing road network along with detail information of its width, surface type and possible intervention required for the effectiveness of services is also carried out.

The primary data collection methods carried out in the field was:

- Road Inventory Survey
- Demand Survey
- Public Transport and Services Study

Road inventory survey was conducted to collect data on its condition of road, road linkage, road safety status and issues that need to be highlight. It helps in field validation of base maps and also assists in preparation of road inventory map, nomenclature and coding of the road linkages and to propose various interventions.

Road Demand survey comprised of interaction session with the members of ward committee followed by asking them to fill up demand survey form, which includes demand of new facility or interventions to improve existing roads based on priority.

Public Transport and Services Study highlights the services provided by public transportation and location of various services and facilities. It was carried out by directly interviewing the route operators.

e. Data Processing, Analysis and Presentation of Reports

Data collected at field were first entered at MS office tools (MS Excel and Word) and GIS database. All the complete and reliable sets of data were transformed into useable information and the present scenario of Rural Municipality are shown through maps, graphs, figures and tables. Similarly, those which were entered into GIS database provide various types of maps and tables. Population and traffic data were forecasted for the RMTMP and RMTPP time period. Various transportation models were used for interpretation and forecasting. And, finally various interventions were proposed and their economic analysis was also performed.

f. Scoring Criteria for Prioritization

A network consists of several links. It is not possible to construct all roads at a time due to resource and time constraint. Therefore, each link in a network needs to be prioritized. After developing a Rural Municipal level network, the cost estimate of the road is prepared. Existing population within the zone of influence, present road demand, future potential route, accessibility situation, land use pattern, environmental and social safeguard, proximity to the market/service centres, religious and tourism places were taken as the indicators for prioritization. The scoring criteria will be finalized after rigorous study and approval from Rural Municipality and RRMRCC.

Table 1: Scoring Criteria for prioritization of Rural Municipal road

S.N	Scoring Criteria	Scoring Unit	Score
1	Link providing service to large settlement areas/population	Population served/km	30
2	Link providing service to existing · market center · tourist attraction areas · other obligatory centres as decided by the Rural Municipality	No of areas	20
3	Link providing service to the existing service centres such as health centres, education centres (schools/campuses), offices (Rural Municipality office/Government office, etc.),	Number of different service sector	20
4	Priority of Ward	Ranking of priority from 1 to 5	20
5	Link providing service to the areas recognised by the Rural Municipality as areas for special consideration, such as areas inhabited by backward and poor ethnic groups/communities, isolated remote areas, historic sites, religious sites etc	Connection to the settlement of such criteria	10
Total			100

Chapter 2: Review of Existing Infrastructure Situation

The chapter deals with the present condition and scenario of the Rural Municipality based on various primary and secondary data sources. Socio-economic, trip, land use and transportation characteristics are basically dealt in this chapter along with analysing accessibility and mobility scenario within the Rural Municipality. The basic data source of the analysis is the collected primary data.

2.1 Location

Ghyanglekh Rural Municipality lies in Sindhuli district of Bagmati Province. Topographically the Rural Municipality entails from 27°16'44"N to 27°24'45"N latitude and from 85°41'01"E to 85°54'18"E longitude with the elevation ranging upto 2100 m. This Rural Municipality lies in the Northeastern part of Sindhuli District.

Table 2 Borders of Ghyanglekh Rural Municipality

East:	Kamalamai Municipality
West:	Kavrepalanchowk District
North:	Sunkoshi Rural Municipality
South:	Marin Rural Municipality & Kamalamai Municipality

This Rural Municipality is surrounded by four Rural Municipalities and one Municipality. Kamalamai Municipality lies in East, Sunkoshi Rural Municipality lies in North, Kavrepalanchowk district lies in West, and Kamalamai Municipality and Marin Rural Municipality lie in South of Ghyanglekh Rural Municipality.

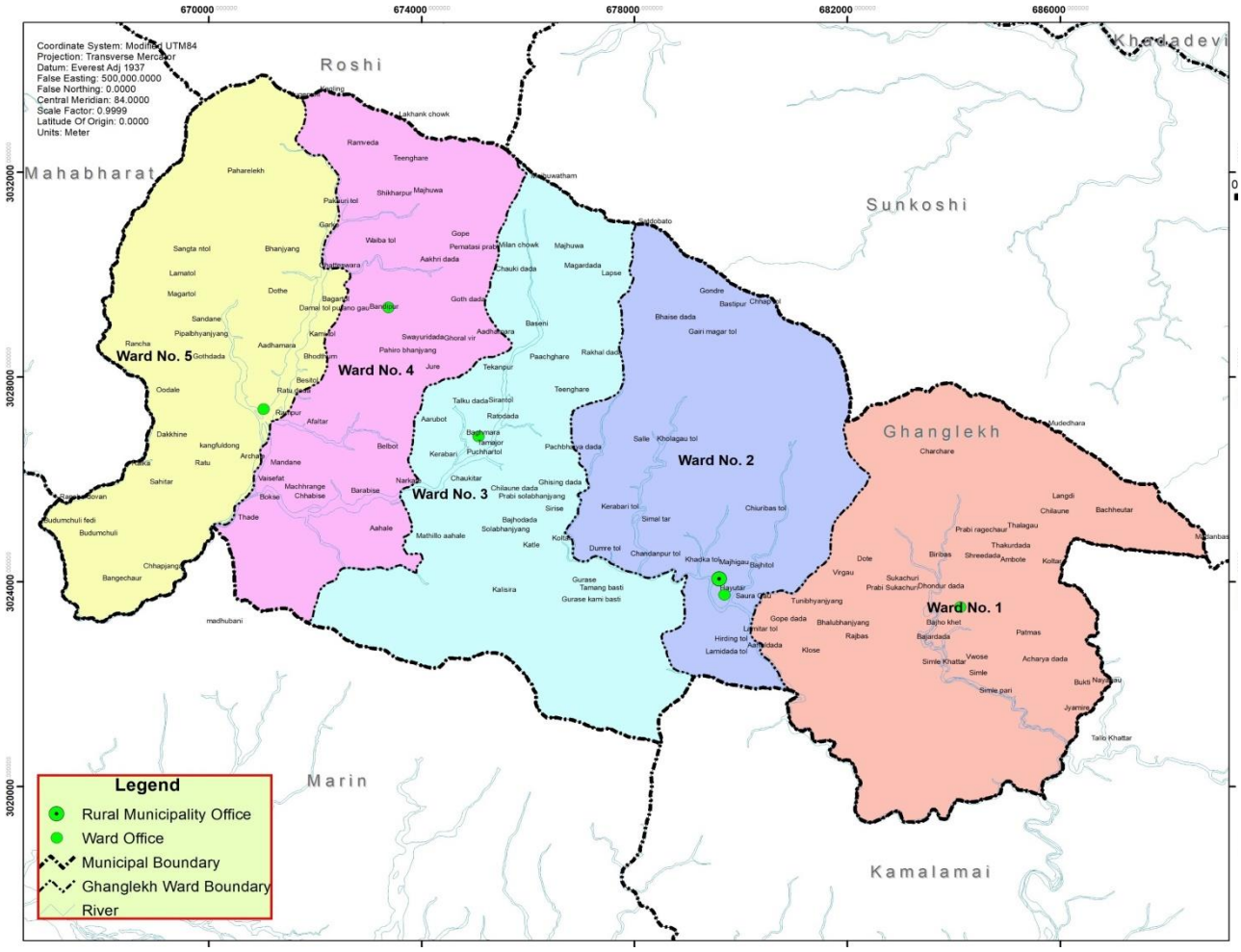


Figure 2 Ward Map of Ghyanglekh Rural Municipality

2.2 Administrative Division

In 12 March 2017, the government of Nepal implemented a new local administrative structure consisting of 753 local units. With this implementation of the new local administrative structure, VDCs have been replaced with the Rural Municipal and Rural Municipal councils.

The Ghyanglekh Rural Municipality was established by merging the Amale (1-9), Bastipur (1-9), Tamajor (1-9), Netrakali (1-9) and Shanteshwori (1-9) Village Development Committees (VDCs) having a total area of 166.77 sq. kms. After merging the five VDCs' population it had a total population of 13,661 according to 2011 Nepal census. At present, the population of Ghyanglekh is 17,261. The population density of Ghyanglekh Rural Municipality is 103.5 person/sq.km. Ghyanglekh Rural Municipality has altogether 5 wards.

Table 3 Formation of wards of Ghyanglekh Rural Municipality

S. No	Ward No	Previous VDC
1	**1**	Amale (1-9)
2	**2**	Bastipur (1-9)
3	**3**	Tamajor (1-9)
4	**4**	Netrakali (1-9)
5	**5**	Shanteshwori (1-9)

Source: MoFAGA, Nepal

2.3 Socio-Demographic Condition

According to Village Profile, population of this Rural Municipality as of 2077BS is 17,261. The overall sex ratio of this Rural Municipality is 1.13 female per male. The population is composed of varieties of ethnic groups. Out of 17,261 population, 12,843 people are of Tamang ethnic group (74.40%), 1,384 people are of Magar ethnic group (8.02%), 1,101 people are of Newar ethnic group (6.38%) and the remaining 11.2% of population is comprised of various caste groups like Bishwokarma, Chhettri, Sunuwar, Thami, Pariyar, etc.

The table below illustrates the wardwise population of this Rural Municipality.

Ward num.	Population (as of 2077 count)
1	2,054
2	3,777
3	3,009
4	4,753
5	3,668
Total	**17,261**

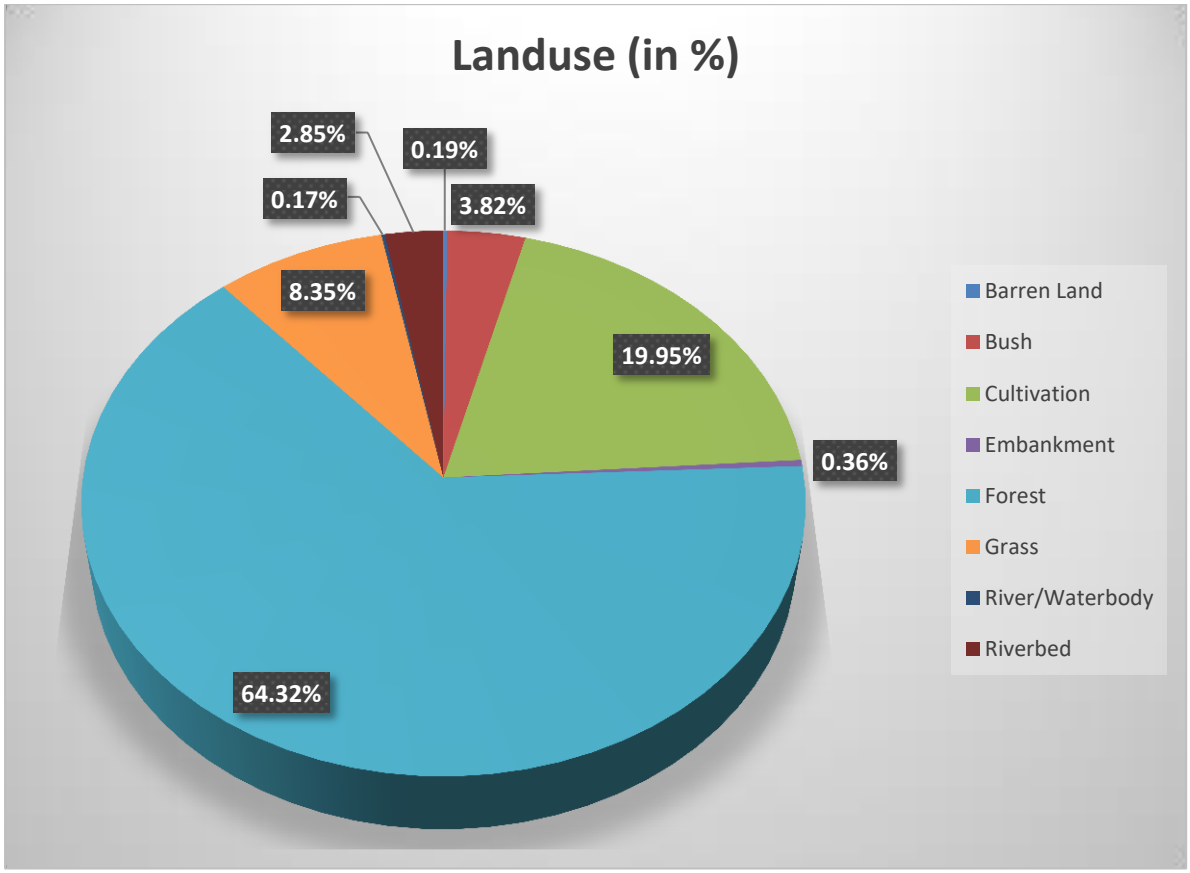
The population density of this Rural Municipality is 103.5 person per square kilometer.

2.4 Land Cover

This Rural Municipality lies in the hilly region of Nepal. Most of the area is covered by forest, cultivation land and grasses. More than half of the area is covered by Forest Areas whereas barren land, pond/lake, River/water body and others cover negligible portion of this Rural Municipality.

Table 4 Land use condition in the study area

S.N	Landuse	Area Covered (Sq. Km)	Percentage Covered
1	Barren Land	0.32	0.19%
2	Bush	6.36	3.82%
3	Cultivation	33.27	19.95%
4	Embankment	0.60	0.36%
5	Forest	107.26	64.32%
6	Grass	13.93	8.35%
8	River/Waterbody	0.28	0.17%
9	Riverbed	4.75	2.85%
Grand Total		**166.77**	**100.00%**



2.5 Transportation

a. Road inventory

For the collection of existing road infrastructure data, GPS survey was used and total length of road surveyed was **316.55 Km**. Based on field survey, ward no 4 has highest length of road and ward no 2 has smallest road length among all wards.

Table 5: Existing Road condition based on Surface Type

Wards	Road Surface/Approx. Length (Km)			
	Concrete	Earthen	Gravelled	Grand Total
Ward 01	0.05	58.62	11.99	70.66
Ward 02	0.03	45.39	5.25	50.67
Ward 03	-	55.04	2.59	57.62
Ward 04	-	72.61	-	72.61
Ward 05	-	64.98	-	64.98
Grand Total	**0.09**	**296.64**	**19.83**	**316.55**

The road inventory including new track is given below:

Table 6: **Existing Road condition based on Surface Type with New Tracks**

Wards	Road Surface/Approx. Length (Km)				
	Concrete	Earthen	Gravelled	New Track	Grand Total
Ward 01	0.05	58.62	11.99	34.19	104.85
Ward 02	0.03	45.39	5.25	11.93	62.60
Ward 03	-	55.04	2.59	23.35	80.97
Ward 04	-	72.61	-	26.12	98.73
Ward 05	-	64.98	-	28.01	92.98
Grand Total	**0.09**	**296.64**	**19.83**	**123.59**	**440.14**

Based on the data collected, it can be seen that the road density per 1000 population is 23.17km per 1000 population and 1.90 km per square kilometre of area. This value is high as compared to national statistics such as 1.91 km per 1000 populations and 0.344 km per square kilometre.

Table 7: Road Density ward wise

Ward No.	Population	Area (Sq. Km)	Road (In Km)	Road Per Sq. Km	Road per 1000 Population
1	2,261	40.96	70.66	1.73	31.25
2	3,029	30.07	50.67	1.69	16.73
3	2,246	35.51	57.62	1.62	25.66
4	3,400	28.52	72.61	2.55	21.36
5	2,725	31.71	64.98	2.05	23.84
Total	**13,661**	**166.77**	**316.55**	**1.90**	**23.17**

In this road inventory survey, it was found that the roads of this Rural Municipality are narrow and their width is insufficient to cross two vehicles from opposite direction at a time. Also, the actual width of feeder road and district roads is very small in comparison to their right of way.

According to the District Transport Master Plan (DTMP) of Sindhuli District, Two road of total length **51.27 KM** of this Rural Municipality is listed as district road core networks (DRCN).

Table 8: District Road Core Networks inside Ghyanglekh Rural Municipality

S.N	Code No.	Road Name	Approx. Length (Km)		Total	Surface Type	Remarks
			Earthen	Gravelled			
1	**20DR004**	Kapilakot Madhubani Rampur Netrakali Kusheshwor Dumja Sadak	26.37	-	26.37	Earthen	DRCN
2	**20DR005**	Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak	5.07	19.83	24.90	Earthen/ Gravelled	DRCN
Grand Total			**31.44**	**19.83**	**51.27**		

These District Roads were under the responsibility of the District Development Committee and now they are under the responsibility of Rural Municipality itself.

a. Bridge/Crossings

This Rural Municipality consists of steep hills and fast flowing streams. Travelling across such geographical surface requires large number of bridges and crossings. Currently, 1 motorable bridge is under construction.

S.N	Existing Cross Drainage Structures	Number
1	**Bridge**	1*
2	**Culvert**	7
3	**Causeway**	9
Total		**17**

b. Road Priority

From the ward level workshop, the most demanding five roads for each ward are collected and these roads will be used for the road priority and while developing road hierarchy.

Table 10: Road Priority ward wise

Wards	Priority/Approx. Length (Kms)					
	1	**2**	**3**	**4**	**5**	**Total**
Ward 01	16.43	7.76	12.13	3.09	7.02	46.44
Ward 02	12.19	6.41	2.63	3.53	3.75	28.51
Ward 03	3.75	13.06	5.07	5.34	3.94	31.15
Ward 04	16.08	5.40	5.54	4.78	5.73	37.54
Ward 05	12.91	7.26	18.10	10.26	2.50	51.03
Total	**61.35**	**39.90**	**43.48**	**27.00**	**22.94**	**194.67**

Wards	Priority	Road Code	Road Name	Approx. Length (Km)
Ward 01	1	B001	Khattar amale hudai Faparchuli sadak	16.43
	2	C001	Amale Dalludada patamas bukti hudai tallo khattar samma sadak	7.76
	3	D020	Mathillo khattar sukachuri dote hudai charchare mudedhara sadak	12.13
	4	D008	Thalagau koltar hudai patamas sadak	3.09
	5	C002	Mudedhara Bachheutar hudai madanbas sadak	7.02
	Total			**46.44**

Wards	Priority	Road Code	Road Name	Approx. Length (Km)
Ward 02	1	B003	Chandanpur dekhi satdobato main sadak	12.19
	2	B002	Satdobato bastipur hudai faparchuli sadak	6.41
	3	C003	Lipekhola dalinbhanjyang majhigau hudai chalise samma sadak	2.63
	4	C004	Swara aahaldada hudai ookhle samma sadak	3.53
	5	C005	Bhaise dekhi godre hudai bastipur jane bato	3.75
	Total			**28.51**
Ward 03	1	C006	Tamajor gothdada bhanjyang sadak	3.75
	2	B004	Solabhanjyang chilaune pachghare lapse hudai satdobato sadak	13.06
	3	D054	Tamajor Bhadaure kholsi dekhi keuraghari hudai pachghare dhunge samma sadak	5.07
	4	B005	Rampur bhaisefat chhabise chaukitar sadak	1.35
		D070	Netrakali mabi talkudada baghmare hudai dhaden aarubot sadak	3.99
	5	D042	Lapse magardada hudai majhuwatham jane sadak	3.94
	Total			**31.15**
Ward 04	1	A004	Bandipur gope ramvede jugepani sadak	9.10
		A006	Rosi gaapaa Pakhurefedi thakurthan archale ratu rancha hudai mahabharat gaapaa sadak	4.24
		C006	Tamajor gothdada bhanjyang sadak	2.74
	2	A005	Jugepani lakhank chaukidada sadak	5.40
	3	C007	Gope mabi dekhi pakhure fedi garke sadak	5.54
	4	B005	Rampur bhaisefat chhabise chaukitar sadak	4.78
	5	C013	Swayuridada Pahirodada jhagaredada jyamiredada hudai rampur sadak	5.73
	Total			**37.54**
Ward 05	1	A006	Rosi gaapaa Pakhurefedi thakurthan archale ratu rancha hudai mahabharat gaapaa sadak	12.91
	2	A003	Kapilakot Madhubani Rampur bajar hudai Netrakali Kusheshwor Dumja Sadak	7.26
	3	B010	Archale chainpur singpal hudai Jugepani (Kalodhunga/piple samma)	18.10
	4	B009	Thakuridada Paharilekh Jugepani sadak	10.26

Wards	Priority	Road Code	Road Name	Approx. Length (Km)
	5	B007	Matokhani kudule besitol rampur bajar Marin Gaapaa hudai lalbandi motor bato	2.50
	Total			**51.03**

c. Traffic Condition

This Rural Municipality possesses mixed traffic. There is some amount of traffic volume on roads connecting Rural Municipality office and Sindhuli. Nevertheless, the traffic on other Rural Municipal roads is negligible. Public transportation is available from Hayutar and Rampur which provide mobility to local people. However, these means of transportation are not reliable due to poor road infrastructures inside the Rural Municipality. For the goods transportation purposes, large and small trucks are being used along with public Jeeps, and for the transportation of construction materials such as sand, stone and gravel, tractors and trippers are being used.

2.6 Public Transportation

Public transport is a shared passenger transport service, which is available for use by anyone who pays the set fares. It generally operates on fixed routes and may include modes such as three-wheelers, mini/micro buses, buses, trolley buses, trams, trains and ferries. Besides reducing congestion and air pollution by providing transportation services to a large number of people, high capacity public transport systems may also influence the urban form and quality of life in cities. While in areas, public transportation mainly deals with providing accessibility, transport of construction materials and goods and linkage with nearest urban area. A good public transport system provides efficient and affordable mobility, and access to work, school/colleges, social, recreation and economic activities.

a. Passenger Movement

Public transportation is inevitable need in today's world. Development of a region cannot be effective and efficient without proper public transportation system. Urban public transportation generally deals with cost effectiveness, time saving and comfort of travel. However, public transportation services more broadly support well-being for residents by also providing

transportation to employment, schools, places of worship, and social and recreational destinations. Access to public transportation in areas is limited by travel times and distances, frequency of service, cost, and limitations in funding to address these challenges.

Figure 3: Public Vehicles inside Rural Municipality

Generally, two types of trips are generated inside this Rural Municipality. First one is trips made from Rural Municipality to nearest cities and finally to capital city- Kathmandu. Second types of trips are intra Rural Municipal trips destined to Rural Municipality center or ward centers. For first kind of trips, public vehicles are available from Hayutar and Rampur. There is no any managed buspark in this Rural Municipality. And open spaces are used as the temporary bus stations in this Rural Municipality. In some wards, people must walk to reach their desired destination due to lack of public vehicles.

b. Freight Transportation

Freight transport is the physical process of transporting commodities and merchandise goods and cargo. In past, people of areas of Nepal used to be independent in basic life requirements. However, with an increase of technology and accessibility, import and export has increased significantly in Rural Municipality. People are now dependent on imported goods for day-to-day life operation. Majority of goods being imported in this Rural Municipality are daily consumption materials—food, clothes, stationary and so on—and construction materials. Generally, goods for daily used are imported from Sindhuli and Ramechhap. Materials for construction materials are also imported from Sindhuli, Ramechhap, etc.

At the beginning, transportation of goods used to be carried by people themselves, which was expensive and tedious process. Transportation through such methods was only possible for people with high purchasing power. Later on, people started using animals as a means of goods of transportation. Mules are still used in areas of Nepal for transportation of goods. This decreased

transportation cost and time of travel and in the meantime, this increased access of general public to imported goods. This significantly increased dependency of people on imported goods. After 90's, road network reached in almost every part of country which significantly increased movement of goods inside country. Nowadays, trucks, pick-up vans are used to transport goods and tippers are mainly used to transport construction materials.

2.7 Travel Pattern and Characteristics

Majority of trips generated are directed towards Hayutar and Rampur, then to Sindhuli Bazar or Khurkot, and subsequently towards Kathmandu. The major routes opted by the people to get in and out of Ghyanglekh RM are: Hayutar – Pipalbhanjyang – Khurkot/Sindhuli – Kathmandu; Rampur – Mahabharat RM – Kavre; and Netrakali – Bandipur – Banepa. People travel to Sindhuli Bazar, Khurkot and Kathmandu in search of employment opportunities, better health care, and better educational facilities. Inside Rural Municipality, majority of trips are directed towards Hayutar, Netrakali, Chaukitar and Rampur and other small market centres.

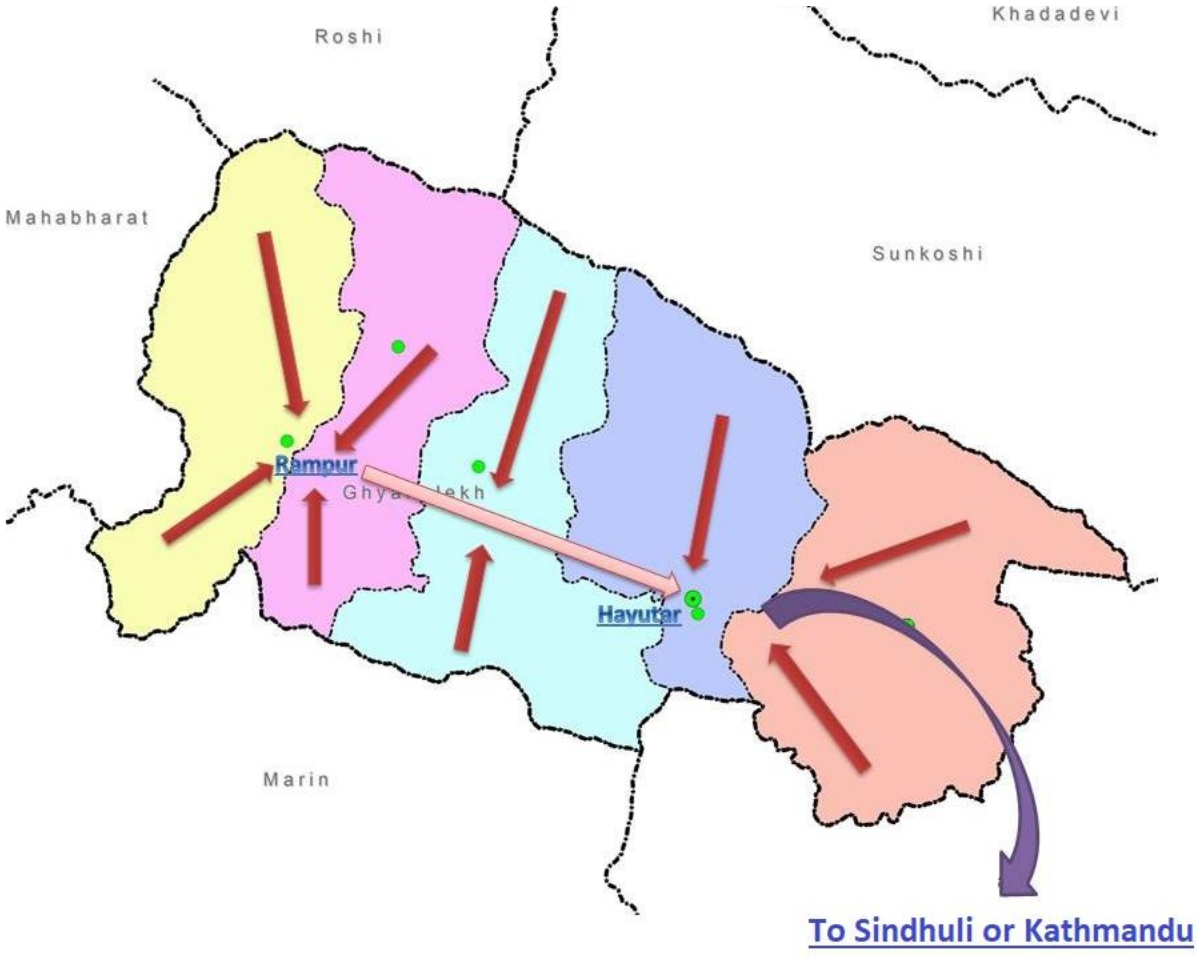


Figure 4: Showing Travel Pattern of Ghyanglekh

2.8 Transport Infrastructure Connectivity

The Ghyanglekh Rural Municipality is located in the Bagmati Province but currently, the traveling route is unnecessarily long. This rural municipality is connected to other parts if the country through road networks only. Hayutar, Ghyanglekh is at a distance of 22 kms from Pipal Bhanjyang on BP Highway, 35 kms from district headquarters Sindhuli Bazar and 158 kms from Kathmandu. The major routes opted by the people to get in and out of Ghyanglekh RM are: Hayutar – Pipalbhanjyang – Khurkot/Sindhuli – Kathmandu; Rampur – Mahabharat RM – Kavre; and Netrakali – Bandipur – Banepa. Buses are operated on the former route as shown in the photo above. The connectivity status is shown in the photo below:

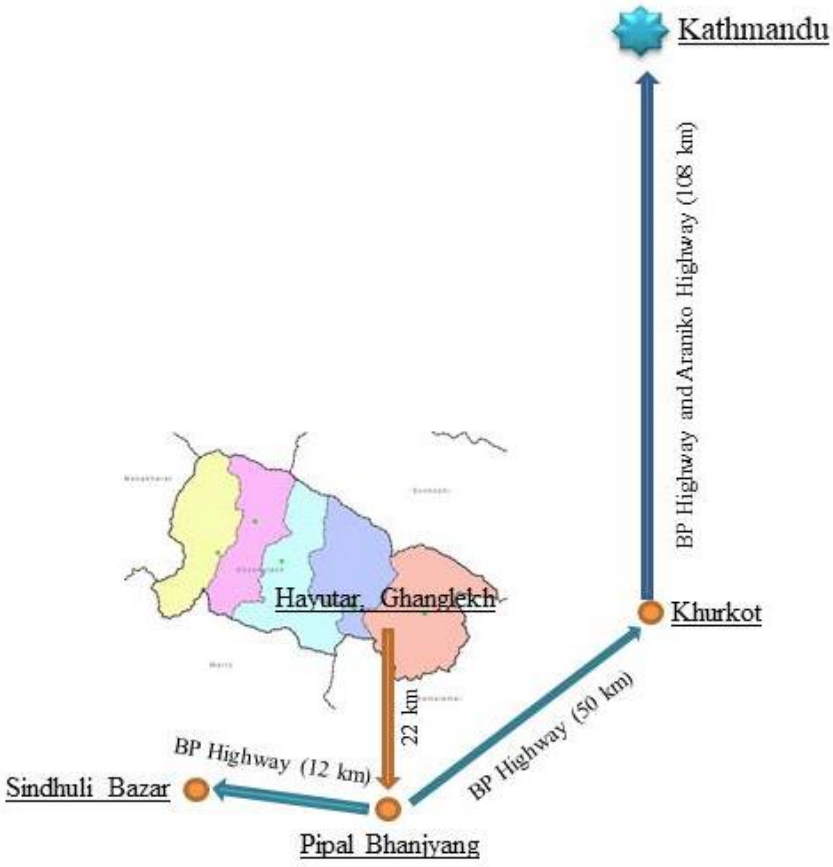


Figure 5: (Illustrative) Connectivity to the Capital City

2.9 Vehicle Ownership Study

People of Ghyanglekh Rural Municipality own various types of vehicles. But the most common vehicle types are: Motorcycle (2 wheeler) and Car/jeep (4-wheeler). The very high number of motorcycles as compared to other vehicle types may be because of the affordability and the flexibility of riding characteristics. The vehicle ownership data is shown as below:

Table 9: Vehicle Ownership Data

Ward	Name of Location	Car/ Jeep	Motorcycle	Total
1	Amale	0	4	4
	Tunibhanjyang	1	0	1
	Dote (Chharchhare)	0	1	1
	Patamas	1	1	2
	Bachheutar	0	0	0
	Rajbas	1	2	3
	Thala Gau	0	1	1
	Simlekhola	0	1	1
	Sukachuri	0	4	4
	Total	**3**	**14**	**17**
2	Andheri	0	0	0
	Kauli Besi	0	0	0
	Khola Gau	0	1	1
	Gairi	0	0	0
	Ghatta Mathi	0	1	1
	Chandanpur	1	6	7
	Charghare	0	0	0
	Dada Gau	0	0	0
	Fulbari (Marin Khola)	0	1	1
	Bastipur	1	4	5
	Bhaise	0	1	1
	Bhokteni	0	2	2
	Motipur	0	0	0
	Lamitar	0	0	0
	Lipekhola	0	0	0
	Lipedada	0	0	0
	Salle	0	0	0
	Hayutar	1	12	13
	Riding	0	1	1
	Total	**3**	**29**	**32**

Ward	Name of Location	Car/ Jeep	Motorcycle	Total
3	Aahale	0	0	0
	Aarubot	1	1	2
	Kerabari	0	0	0
	Koltar	1	2	3
	Chilaune	0	1	1
	Chaukitar	0	2	2
	Tamajor	2	12	14
	Pachbhaiya	0	1	1
	Pachghare	0	2	2
	Pipaltol	0	2	2
	Majuwa	0	0	0
	Rakhal	0	0	0
	Rato Gurase	1	0	1
	Lapse	0	1	1
	Total	**5**	**24**	**29**
4	Aadhamara	1	2	3
	Aapdada	1	0	1
	Gep	0	2	2
	Gothdada	0	0	0
	Chauki Dada	1	1	2
	Jure	0	0	0
	Bandipur	0	0	0
	Bhodapthum	0	0	0
	Majuwa	0	0	0
	Sikharpur	1	1	2
	Subbadada	0	0	0
	Syauri Dada	0	0	0
	Total	**4**	**6**	**10**
5	Adchale	0	0	0
	Abjase	3	1	4
	Dalit Basti	0	0	0
	Garke	1	0	1
	Ghate Swara	1	0	1
	Ghising Tol	0	0	0
	Chainpur	0	1	1
	Thakuri Dada	0	0	0
	Dothe	0	0	0
	Padheri Khola	0	0	0
	Pahari Lekh	0	0	0
	Paktung Dada	0	0	0
	Pakhure	1	0	1

Ward	Name of Location	Car/ Jeep	Motorcycle	Total
	Purano gau	0	0	0
	Bagar Tol	0	0	0
	Budumchuli	0	1	1
	Bhangjyang	0	0	0
	Maktung Dada	0	0	0
	Rangcha	0	0	0
	Ratu	0	0	0
	Rana Gau	0	0	0
	Rampur	1	2	3
	Shanteshwori	0	0	0
	Simpal	0	0	0
	Total	**7**	**5**	**12**
Grand Total		22	78	100

The data can be visualized in charts as follows:

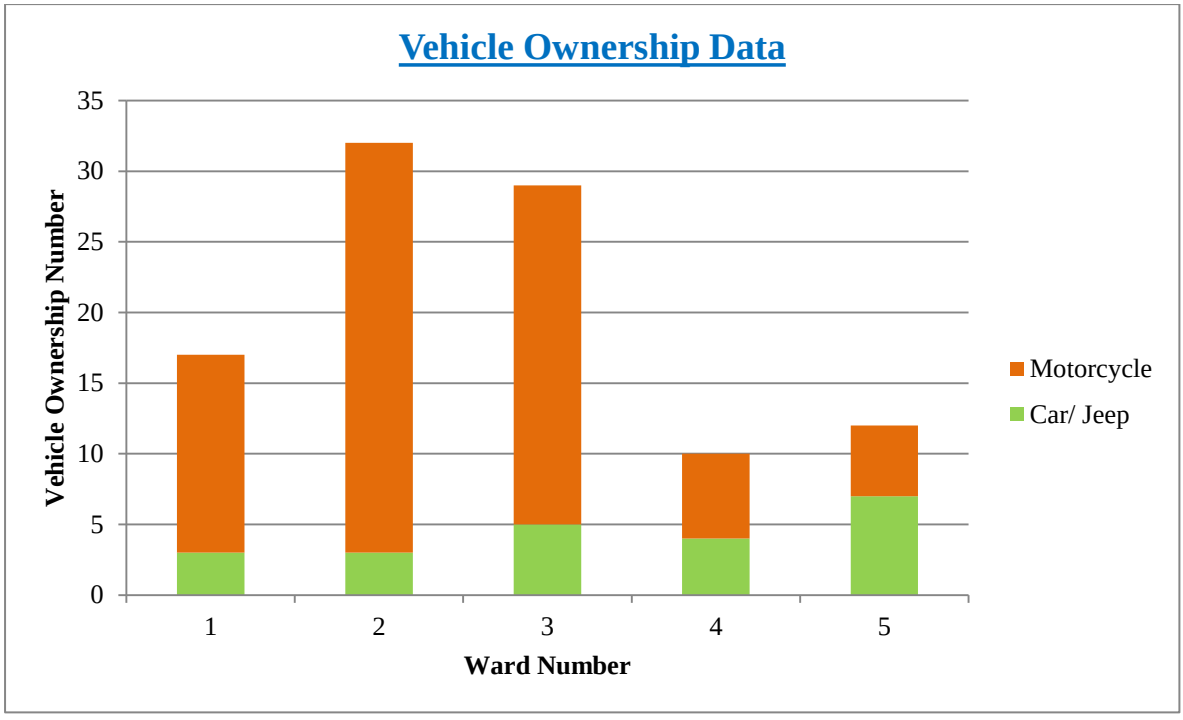


Figure 6: Vehicle Ownership Data

2.10 Road Network Deficiencies

The major deficiencies of road network are as follows:

1. Lack of proper cross drainage structures
2. Narrow and earthen roads
3. Majority of roads fail to provide service during rainy season
4. Slope of roads is too high for smooth operation of vehicle
5. Roads do not interlink between each other for proper operation of public vehicles

2.11 Visionary City Development Plan

The vision of Ghyanglekh Rural Municipality should be to develop an environment friendly and clean Rural Municipality by fostering its cultural and religious history and importance with modern urban facilities. However, this plan is yet to be prepared.

For this, the main visionary city development plan of the Rural Municipalityis to develop/preserve the following:

1. Agriculture
2. Tourism
3. Industry

2.12 Indicative Development Potential

IDP is basically the indication of the existing and potential market center/service centers (key growth centers) and the areas having various development potentials such as agro-based industries, high value cash crops and tourism. Thus, IDP shows high value cash crops, tourism area, and area of service centers such as hospital, post office, telecommunication, school, campus, security offices and large settlements, important historic and religious places. Finally, it prepares the ranking of the markets of the Rural Municipalities the basis of network planning. Existing/potential areas are defined as:

- Existing/potential areas for development of large industries.
- Areas with extensive small cottage industries.

- Area with service centers such as hospital, post office, telecommunication, school, campus, security offices, Bus Park, sport and recreational centers etc.
- Potential areas for tourism development.
- Area with large settlements.
- Area with important historic and religious places.
- Areas with extensive high value cash crops
- Areas with extensive horticulture.
- Areas with extensive livestock farming.

Chapter 3: Hierarchy of Rural Municipality Road Network

3.1 Road Hierarchy

Roadways serve a variety of functions, including but not limited to the provision of direct access to properties, pedestrian and bicycle paths, bus routes and catering for through traffic that is not related to immediate land uses. Many roads serve more than one function and to varying degrees, but it is clear that the mixing of incompatible functions can lead to problems. A road hierarchy is a means of defining each roadway in terms of its function such that appropriate objectives for that roadway can be set and appropriate design criteria can be implemented. These objectives and design criteria are aimed at achieving an efficient road system whereby conflicts between the roadway and the adjacent land use are minimized and the appropriate level of interaction between the roadway and land use is permitted. The road hierarchy can, then, form the basis of ongoing planning and system management aimed at reducing the mixing of incompatible functions.

3.2 Objectives of Road Hierarchy

The key objective of a road hierarchy is to ensure the orderly grouping of roadways in a framework around which state and local governments can plan and implement various construction, maintenance, and management schemes and projects. It should also assist local and state governments with the adoption of appropriate standards for roadway construction.

A well-formed road hierarchy will reduce overall impact of traffic by:

- concentrating longer distance flow onto routes in less sensitive locations;
- ensuring land uses and activities that are incompatible with traffic flow are restricted from routes where traffic movement should predominate;
- preserving areas where through traffic is discouraged;
- Ensuring activities most closely related to frontage development, including social interaction and parking, can be given more space within precincts where environmental and access functions should predominate.
- orderly planning of heavy vehicle and dangerous goods routes;
- planning and provision of public transport routes;
- planning and provision of pedestrian and bicycle routes;

- identifying the effects of development decisions in and on surrounding areas and roadways within the hierarchy;
- development design that facilitates urban design principles such as accessibility, connectivity, efficiency, amenity and safety;
- assigning control over access onto traffic carrying roads to ensure safe and efficient operation for traffic;
- Identifying treatments such as barriers, buffers and landscaping to preserve amenity for adjacent land uses. Thus, in order for road hierarchy to be effective, it needs to be much more than just a map of colored lines. This paper presents road hierarchy principles that can be applied to produce a powerful planning tool.

3.3 Classification of Rural Municipal Road Network

A productive transportation system accompanies an order. The hierarchy of road is dependent upon the function that the street is required to perform, and the kind of movement and the way users present. The outline speeds, way widths and other geometric characteristics are adapted to suit the way work. Based on these guidelines, the road networks inside Rural Municipality are classified in four classes:

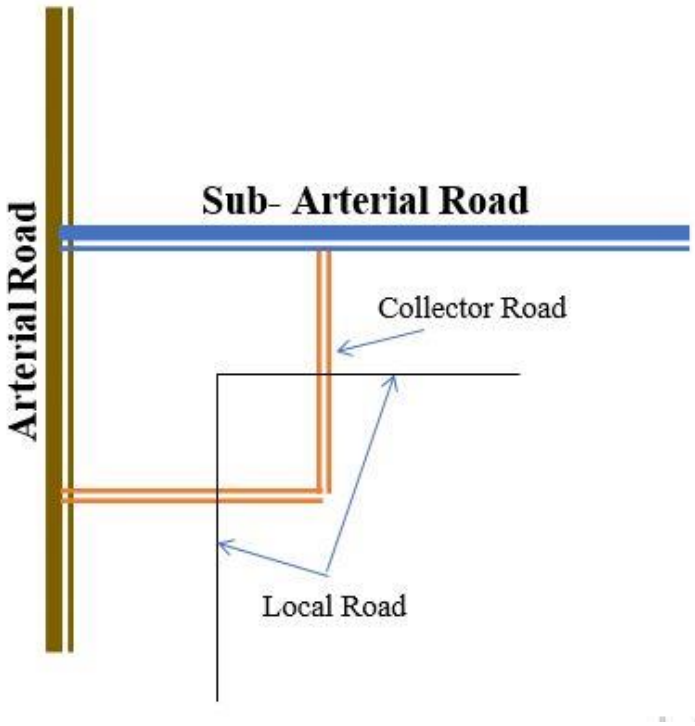


Figure 7: Classification Road

a. Arterial Roads

They are the primary roads & are on top in hierarchy of roads for guaranteeing versatility capacity. They convey the biggest volumes of movement and longest trips in Municipality. These are characterized by through movement with confined access from carriageway to the side. In such cases, unique provisions ought to be acquainted with decrease clash with the through movement. These roads have the most extreme right of way and traffic volume around the four classes.

b. Sub Arterial Roads

This class of road takes after all the capacities of an arterial road and is portrayed by portability, and indulges through movement with confined access from carriageway to the side. It conveys same movement volumes as the arterial roads. Because of its overlapping nature, Sub arterial roads can function as arterials. This is setting particular and is dependent upon the capacity and the area use advancement it passes through.

c. **Distributor/collector Roads**

As the name recommends, these are connector ways which circulate the activity from access lanes to arterial and sub arterial roads. They are portrayed by portability and access just as. They are portrayed by a low speed limit and have a comparatively small ROW. It conveys moderate movement volumes contrasted with the arterial roads. Because of its covering nature, merchant streets can go about as a sub arterial road and as access lanes, contingent on the capacity and the area utilization of the surroundings.

d. Local Roads

These are utilized for access capacities to bordering lands and regions. A greater part of excursions in the area normally begin or end on these streets. They cater to low velocity and have a nominal ROW of 6m. They convey generally lower volumes of movement at low speeds. They are described by access prevalently; they could be utilized for gatherer capacities.

In total, there are roads of length 421.05 Km within the Rural Municipality excluding feeder roads and National Highways, either in planned or existing condition. All the standards set by the Rural Municipality council are assumed not to decrease its ROW whenever these roads fall on the lower class in this RMTMP.

Table 10: Arrangement of Road width

SN	Road Class	Min RoW(m)	Setback(m)	Pavement(m)
1	A	14/20	1.5/3	11/14
2	B	10	1.5	7
3	C	8	1.5	5.5
4	D	6	1.5	3.75

**The ROW of District Road Core Networks (DRCNs) is 20m*

3.4 Rural Municipality Level Arterial Roads (Class A)

All major roads which connect one or more major Growth Centres (market, tourism Centre, industry, etc.) or several Wards with high network coverage, connected directly or through the National Strategic Road Network or district road falls on the road class A. The proposed right of way for this class of road is 14m and greater than 14m which include footpath, greenery, and the carriageway as shown below in the cross section.

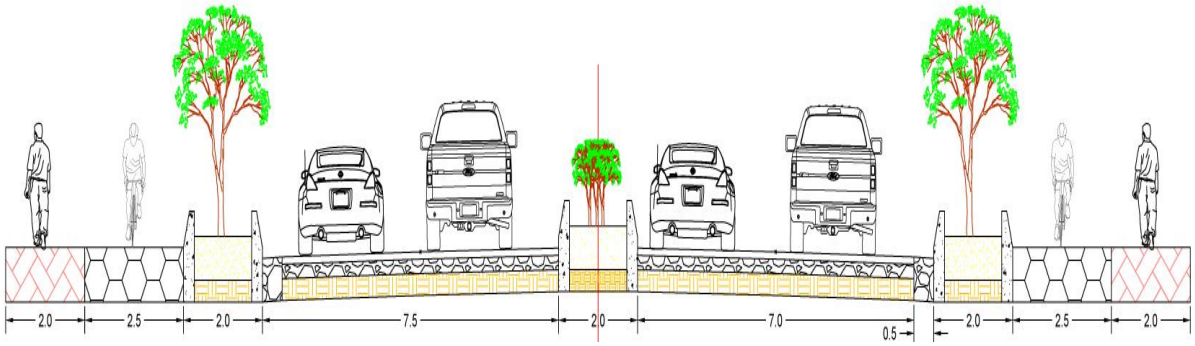


Figure 8: Typical section for Class A road

There are 7 Rural Municipal roads of class A of total length 89.86 Km out of which 82.98 km is existing road and 6.89Km is the new track. Detail of inventory of Class A roads is illustrated in table below:

Table 11: List of Rural Municipality Level Arterial Roads (Class A)

Road Code	Road Name	Approx. Length (Km)			Total
		Earthen	Gravelled	New Track	
A001	Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak	5.07	19.83	-	24.90
A002	Mudedhara madanbas krisi sadak	3.82	-	-	3.82
A003	Kapilakot Madhubani Rampur bajar hudai Netrakali Kusheshwor Dumja Sadak	26.37	-	-	26.37
A004	Bandipur gope ramvede jugepani sadak	8.20	-	0.90	9.10
A005	Jugepani lakhank chaukidada sadak	5.40	-	-	5.40
A006	Rosi gaapaa Pakhurefedi thakurthan archale ratu rancha hudai mahabharat gaapaa sadak	13.62	-	3.53	17.15
A007	Archale Kanflongdong Hattiaahal dekhi rancha motor bato	0.67	-	2.46	3.13
Grand Total		**63.15**	**19.83**	**6.89**	**89.86**

3.5 Rural Municipality Level Sub Arterial Roads (Class B)

The municipality level sub-arterial roads function as alternatives for arterial roads. They link arterial roads with collector and distributor roads. All roads which connect to a major road network and other roads of similar hierarchy with a road connecting major Growth Centre of the same or neighboring wards which provide access between Class A and class C road falls on the category of class B. The proposed right of way (ROW) of this class road is 10 m.

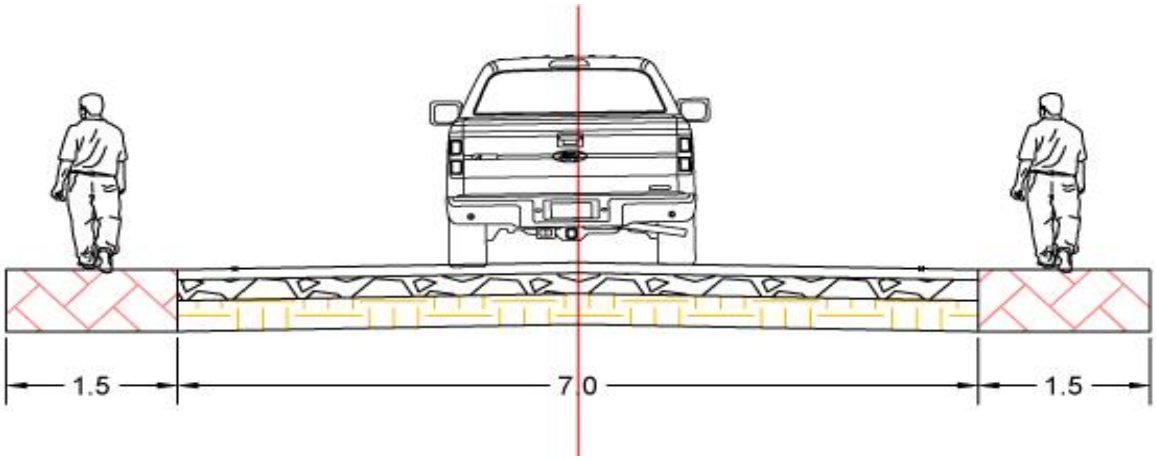


Figure 9 Typical section for Class B road

There are 12 Rural Municipal roads of class B of total length 96.93 Km out of which 78.50 Km is existing road and 18.43 Km is the new track. Detail of inventory of Class B roads is illustrated in table below:

Table 12: List of Rural Municipality Level Sub-Arterialroads (Class B)

Road Code	Road Name	Approx. Length (Km)			Total
		Concrete	Earthen	New Track	
B001	Khattar amale hudai Faparchuli sadak	0.05	16.38	-	16.43
B002	Satdobato bastipur hudai faparchuli sadak	-	2.36	4.05	6.41
B003	Chandanpur dekhi satdobato main sadak	-	12.19	-	12.19
B004	Solabhanjyang chilaune pachghare lapse hudai satdobato sadak	-	12.52	0.54	13.06
B005	Rampur bhaisefat chhabise chaukitar sadak	-	4.78	1.35	6.14
B006	Kalikhola bokse hudai katauche madhubani jodne sadak	-	1.30	3.36	4.66
B007	Matokhani kudule besitol rampur bajar Marin Gaapaa hudai lalbandi motor bato	-	0.55	1.95	2.50
B008	Ramvede fedi gope hudai kamitol jodne sadak	-	-	2.45	2.45
B009	Thakuridada Paharilekh Jugepani sadak	-	10.26	-	10.26
B010	Archale chainpur singpal hudai Jugepani sadak (Kalodhunga/piple samma)	-	18.10	-	18.10
B011	Dothe Rancha sadak	-	-	0.95	0.95
B012	Singpal Paharilekh Jugepani sadak	-	-	3.77	3.77
Grand Total		**0.05**	**78.45**	**18.43**	**96.93**

3.6 Rural municipality Level Collector Roads (Class C)

All roads which connect to a major road network and other roads of similar hierarchy with a road connecting major Growth Centre of the same or neighboring wards which provide access between Class A and B and class D road falls on the category of class C. The right of way of this class road is 8m.

The following is the list of local roads (Class C). Total length of Class C roads is 56.81 Km, out of which 52.29 Km is existing road with earthen surface and 4.52 Km is the New Track.

Table 13: List of Local Level Collector roads (Class C)

Road Code	Road Name	Approx. Length (Km)		Total
		Earthen	New Track	
C001	Amale Dalludada patamas bukti hudai tallo khattar samma sadak	7.76	-	7.76
C002	Mudedhara Bachheutar hudai madanbas sadak	7.02	-	7.02
C003	Lipekhola dalinbhanjyang majhigau hudai chalise samma sadak	2.63	-	2.63
C004	Swara aahaldada hudai ookhle samma sadak	1.46	2.07	3.53
C005	Bhaise dekhi godre hudai bastipur jane bato	3.75	-	3.75
C006	Tamajor gothdada bhanjyang sadak	6.48	-	6.48
C007	Gope mabi dekhi pakhure fedi garke sadak	5.54	-	5.54
C008	Narkate tallo aahale hudai mathillo aahale Sadak	2.09	1.24	3.33
C009	Aapdada Barabise sadak	2.27	-	2.27
C010	Simle fedi dekhi health post hudai sahakari dada jodne sadak	1.07	0.60	1.67
C011	Damaidada magardada sadak	1.56	0.61	2.17
C012	Bhaise rampur sadak	1.86	-	1.86
C013	Swayuridada Pahirodada jhagaredada jyamiredada hudai rampur sadak	5.73	-	5.73
C014	Pahiro bhanjyang bhorthum kudule rampur bazar sadak	3.06	-	3.06
Grand Total		**52.29**	**4.52**	**56.81**

3.7 Local Roads (Class D)

All roads which provide connection to higher order roads with all agricultural roads which connect a farm with a mini-market Centre or an agro-based production Centre and means for mobility of local trips are understood as road class D. The proposed right of way for class D roads is 6 m.

The following is the list of local roads (Class D). Total length of Class D roads is 196.54 Km, out of which 102.78 Km is existing road with earthen surface and 93.76 Km is the New Track.

Table 14: List of Local roads (Class D)

Road Code	Road Name	Approx. Length (Km)			Total
		Concrete	Earthen	New Track	
D001	Simle pari hudai dhanamana samma sadak	-	-	4.54	4.54
D002	Jyamire simle sadak	-	1.16	0.59	1.75
D003	Bukti nayagau sadak	-	0.80	-	0.80
D004	Acharya dada simle sadak	-	0.21	1.84	2.05
D005	Simle vwose hudai patmas sadak	-	3.73	-	3.73
D006	Amale bhanjyang vwose dada sadak	-	-	1.10	1.10
D007	Mahintar sadak	-	-	1.04	1.04
D008	Thalagau koltar hudai patamas sadak	-	1.85	1.25	3.09
D009	Koltar hudai walding school	-	-	0.74	0.74
D010	Koltar bachheutar sadak	-	-	2.63	2.63
D011	Thalagau langdi bachheutar sadak	-	3.73	-	3.73
D012	Sunuwar tol langdi sadak	-	-	0.27	0.27
D013	Sunuwar tol langdi terso sadak	-	-	0.95	0.95
D014	Ambote sadak	-	0.87	-	0.87
D015	Amale mabi jane bato	-	0.17	-	0.17
D016	Amale woda karyalaye hudai biribas jane sadak	-	0.13	1.96	2.09
D017	Jogitar hudai ghattekhola samma sadak	-	-	0.54	0.54
D018	Khattar bajhkhet hudai bajardada sadak	-	-	1.98	1.98
D019	Simle khattar hudai bajar dada sadak	-	-	0.44	0.44
D020	Mathillo khattar sukachuri dote hudai charchare mudedhara sadak	-	8.27	3.86	12.13

Road Code	Road Name	Approx. Length (Km)			Total
		Concrete	Earthen	New Track	
D021	Dhondurdada biribas sadak	-	2.74	-	2.74
D022	Sukachuri tunibhanjyang sadak	-	-	1.83	1.83
D023	Tunibhanjyang virgau sadak	-	-	1.21	1.21
D024	Dote faparchuli sadak	-	-	1.82	1.82
D025	Rajabas bajardada klose hudai marin khola sadak	-	-	1.60	1.60
D026	Tunibhanjyang gopedada klose hudai marin khola sadak	-	-	2.71	2.71
D027	Tunibhanjyang besitol hudai school samma sadak	-	-	1.29	1.29
D028	Dalinbhyanjang dekhi lipedada sadak	-	1.00	-	1.00
D029	Chiurebas jane bato	-	3.46	-	3.46
D030	Hayutar hudai Nepal SBI bank jane bato	0.03	0.44	-	0.48
D031	Woda karyalaye 2 jane bato	-	0.17	-	0.17
D032	Hayutar hirding sadak	-	1.63	-	1.63
D033	Gaapaa Jane bato	-	0.19	-	0.19
D034	Aapdada Sano Bhakteni hudai thulo bhakteni jane sadak	-	2.89	-	2.89
D035	Chandanpur Khola gau sadak	-	4.70	-	4.70
D036	Salle dekhi marin khola sadak	-	1.62	-	1.62
D037	Bhaise pradhantol hudai charghare sadak	-	1.56	-	1.56
D038	Satdobato dekhi bastipur sadak	-	1.46	-	1.46
D039	Bhaise dekhi aadheri samma sadak	-	1.20	0.52	1.72
D040	Satdobato dekhi aadheri samma sadak	-	1.52	-	1.52
D041	Lapse aadheri vaise sadak	-	-	1.79	1.79
D042	Lapse magardada hudai majhuwatham jane sadak	-	3.22	0.71	3.94
D043	Koltar gurase sambhudada sadak	-	2.77	0.78	3.55
D044	Gurase kami basti sadak	-	0.46	-	0.46
D045	Koltar ratu khola kalisir sadak	-	1.25	1.02	2.27
D046	Koltar katle sadak	-	0.84	0.33	1.17
D047	Mahila bhawan jane bato	-	0.07	-	0.07
D048	Krisi sakha karyelaye jane bato	-	0.07	-	0.07
D049	Kerabari school jane bato	-	0.21	-	0.21

Road Code	Road Name	Approx. Length (Km)			Total
		Concrete	Earthen	New Track	
D050	Solabhanjyang dodh hudai sirise Ghising dada jane sadak	-	2.66	0.54	3.19
D051	Sirise marin khola sadak	-	-	1.09	1.09
D052	Tinghare bhatmas dada sadak	-	-	0.41	0.41
D053	Pachghare vedekharka sadak	-	-	0.82	0.82
D054	Tamajor Bhadaure kholsi dekhi keuraghari hudai pachghare dhunge samma sadak	-	5.07	-	5.07
D055	Pachghare bisauni dada sadak	-	-	0.40	0.40
D056	Tamajor sirantol dekhi pachghare fedi sadak	-	-	0.93	0.93
D057	Tamajor Sombare pachabhaiya sadak	-	-	2.25	2.25
D058	Tamajor red cross vawan hudai rato dada sadak	-	0.53	0.09	0.62
D059	Tamajor khola hudai chilaune dada sadak	-	3.34	-	3.34
D060	Chaukitar chilaune dada sadak	-	-	1.17	1.17
D061	Chaukitar jagajite dada sadak	-	0.64	-	0.64
D062	Solobhanjyang Mathillo aahale sadak	-	2.21	-	2.21
D063	Mathillo aahale kalikhola sadak	-	-	1.77	1.77
D064	Aahale masanghat sadak	-	0.45	1.12	1.57
D065	Chaukitar Sirutar sarpakhop sadak	-	0.51	0.73	1.24
D066	Chhabise Kapase sadak	-	0.47	-	0.47
D067	Kerabari sadak	-	0.92	0.26	1.18
D068	Baghmara manepakha barelidada hudai kerabari sadak	-	0.81	0.46	1.27
D069	Tamajor varrafedi dekhi baghmara sadak	-	-	0.53	0.53
D070	Netrakali mabi talkudada baghmare hudai dhaden aarubot sadak	-	3.99	-	3.99
D071	Tamajor baghmara sadak	-	-	0.31	0.31
D072	Talkudada sadak	-	0.31	-	0.31
D073	Sirantol swasthe chauki jane sadak	-	0.21	-	0.21
D074	Tekanpur baseni kholaghari sadak	-	-	2.53	2.53
D075	Jure aadhamara sadak	-	-	2.34	2.34
D076	Simhayutar muldada hudai pahiro bhanjyang sadak	-	1.66	1.55	3.22
D077	Gothdada ghising tol sadak	-	0.87	-	0.87

Road Code	Road Name	Approx. Length (Km)			Total
		Concrete	Earthen	New Track	
D078	Chaukidada goth dada sadak	-	2.15	-	2.15
D079	Majhuwa thumka dekhi barabhise sadak	-	0.94	1.76	2.70
D080	Lakhank teenghare majhuwa sadak	-	1.49	2.06	3.55
D081	Dothe dekhi puchhartol hudai pakhuri jodne sadak	-	-	1.91	1.91
D082	Bandipur gau dekhi thansing dada sadak	-	-	2.90	2.90
D083	Bhorthum bagartol sadak	-	0.85	1.69	2.54
D084	Charghare motor bato	-	0.63	-	0.63
D085	Ghatteswara paktungdada hudai dothe motor bato	-	-	2.25	2.25
D086	Garke ramailo basti hudai rampur dada motor bato	-	3.04	-	3.04
D087	Pakhurefedi devithan hudai paharilekh motor bato	-	-	2.38	2.38
D088	Khanikhola kharibot dothe motor bato	-	1.58	-	1.58
D089	Rampur khanikhola gyandada chainpur motor bato	-	3.80	-	3.80
D090	Jogidada sandhane motor bato	-	0.74	-	0.74
D091	Singpal ranagau motor bato	-	0.99	0.40	1.39
D092	Kolbote dakshinkali motor bato	-	1.06	-	1.06
D093	Pipalbhyanjang dakshinkali motor bato	-	2.28	0.88	3.15
D094	Ratudovan hudai budumchuli motor bato	-	3.40	0.58	3.99
D095	Bastipur hudai kaule baseri motipur sadak	-	-	4.47	4.47
D096	Tallo gaira magar tol jodne sadak	-	0.81	-	0.81
D097	Tamajor kholaghari majhuwa motor bato	-	-	4.09	4.09
D098	Charghare motor bato	-	-	1.01	1.01
D099	Bandipur sauradada keraubari pipalbot sadak	-	-	3.38	3.38
D100	Darigau dothe motor bato	-	-	2.41	2.41
D101	Rampur bazar darigau motor bato	-	-	1.33	1.33
D102	Ratu saitar motor bato	-	-	0.87	0.87
D103	Barbare motor bato	-	-	0.76	0.76
Grand Total		**0.03**	**102.75**	**93.76**	**196.54**

3.8 NEW TRACKS

Various New Tracks have been proposed in Rural Municipality. The details of new tracks are listed below.

Table 15: List of New Tracks

S.N	Road Code	Road Name	Total Length (Km)
1	**A004**	Bandipur gope ramvede jugepani sadak	0.90
2	**A006**	Rosi gapa Pakhurefedi thakurthan archale ratu rancha hudai mahabharat gaapaa sadak	3.53
3	**A007**	Archale Kanflongdong Hattiaahal dekhi rancha motor bato	2.46
4	**B002**	Satdobato bastipur hudai faparchuli sadak	4.05
5	**B004**	Solabhanjyang chilaune pachghare lapse hudai satdobato sadak	0.54
6	**B005**	Rampur bhaisefat chhabise chaukitar sadak	1.35
7	**B006**	Kalikhola bokse hudai katauche madhubani jodne sadak	3.36
8	**B007**	Matokhani kundule besitol rampur bajar Marin Gaapaa hudai lalbandi motor bato	1.95
9	**B008**	Ramvede fedi gope hudai kamitol jodne sadak	2.45
10	**B011**	Dothe Rancha sadak	0.95
11	**B012**	Singpal Paharilekh Jugepani sadak	3.77
12	**C004**	Swara aahaldada hudai ookhle samma sadak	2.07
13	**C008**	Narkate tallo aahale hudai mathillo aahale Sadak	1.24
14	**C010**	Simle fedi dekhi health post hudai sahakari dada jodne sadak	0.60
15	**C011**	Damaidada magardada sadak	0.61
16	**D001**	Simle pari hudai dhanamana samma sadak	4.54
17	**D002**	Jyamire simle sadak	0.59
18	**D004**	Acharya dada simle sadak	1.84
19	**D006**	Amale bhanjyang vwose dada sadak	1.10
20	**D007**	Mahintar sadak	1.04
21	**D008**	Thalagau koltar hudai patamas sadak	1.25
22	**D009**	Koltar hudai walding school	0.74
23	**D010**	Koltar bachheutar sadak	2.63

S.N	Road Code	Road Name	Total Length (Km)
24	**D012**	Sunuwar tol langdi sadak	0.27
25	**D013**	Sunuwar tol langdi terso sadak	0.95
26	**D016**	Amale woda karyalaye hudai biribas jane sadak	1.96
27	**D017**	Jogitar hudai ghattekhola samma sadak	0.54
28	**D018**	Khattar bajhkhet hudai bajardada sadak	1.98
29	**D019**	Simle khattar hudai bajar dada sadak	0.44
30	**D020**	Mathillo khattar sukachuri dote hudai charchare mudedhara sadak	3.86
31	**D022**	Sukachuri tunibhanjyang sadak	1.83
32	**D023**	Tunibhanjyang virgau sadak	1.21
33	**D024**	Dote faparchuli sadak	1.82
34	**D025**	Rajabas bajardada klose hudai marin khola sadak	1.60
35	**D026**	Tunibhanjyang gopedada klose hudai marin khola sadak	2.71
36	**D027**	Tunibhanjyang besitol hudai school samma sadak	1.29
37	**D039**	Bhaise dekhi aadheri samma sadak	0.52
38	**D041**	Lapse aadheri vaise sadak	1.79
39	**D042**	Lapse magardada hudai majhuwatham jane sadak	0.71
40	**D043**	Koltar gurase sambhudada sadak	0.78
41	**D045**	Koltar ratu khola kalisir sadak	1.02
42	**D046**	Koltar katle sadak	0.33
43	**D050**	Solabhanjyang dodh hudai sirise Ghising dada jane sadak	0.54
44	**D051**	Sirise marin khola sadak	1.09
45	**D052**	Tinghare bhatmas dada sadak	0.41
46	**D053**	Pachghare vedekharka sadak	0.82
47	**D055**	Pachghare bisauni dada sadak	0.40
48	**D056**	Tamajor sirantol dekhi pachghare fedi sadak	0.93
49	**D057**	Tamajor Sombare pachabhaiya sadak	2.25
50	**D058**	Tamajor red cross vawan hudai rato dada sadak	0.09
51	**D060**	Chaukitar chilaune dada sadak	1.17
52	**D063**	Mathillo aahale kalikhola sadak	1.77

S.N	Road Code	Road Name	Total Length (Km)
53	**D064**	Aahale masanghat sadak	1.12
54	**D065**	Chaukitar Sirutar sarpakhop sadak	0.73
55	**D067**	Kerabari sadak	0.26
56	**D068**	Baghmara manepakha barelidada hudai kerabari sadak	0.46
57	**D069**	Tamajor varrafedi dekhi baghmara sadak	0.53
58	**D071**	Tamajor baghmara sadak	0.31
59	**D074**	Tekanpur baseni kholaghari sadak	2.53
60	**D075**	Jure aadhamara sadak	2.34
61	**D076**	Simhayutar muldada hudai pahiro bhanjyang sadak	1.55
62	**D079**	Majhuwa thumka dekhi barabhise sadak	1.76
63	**D080**	Lakhank teenghare majhuwa sadak	2.06
64	**D081**	Dothe dekhi puchhartol hudai pakhuri jodne sadak	1.91
65	**D082**	Bandipur gau dekhi thansing dada sadak	2.90
66	**D083**	Bhorthum bagartol sadak	1.69
67	**D085**	Ghatteswara paktungdada hudai dothe motor bato	2.25
68	**D087**	Pakhurefedi devithan hudai paharilekh motor bato	2.38
69	**D091**	Singpal ranagau motor bato	0.40
70	**D093**	Pipalbhyanjang dakshinkali motor bato	0.88
71	**D094**	Ratudovan hudai budumchuli motor bato	0.58
72	**D095**	Bastipur hudai kaule baseri motipur sadak	4.47
73	**D097**	Tamajor kholaghari majhuwa motor bato	4.09
74	**D098**	Charghare motor bato	1.01
75	**D099**	Bandipur sauradada keraubari pipalbot sadak	3.38
76	**D100**	Darigau dothe motor bato	2.41
77	**D101**	Rampur bazar darigau motor bato	1.33
78	**D102**	Ratu saitar motor bato	0.87
79	**D103**	Barbare motor bato	0.76
Grand Total			**123.59**

3.9 Rural Municipal Level Ring Roads

The RM council has proposed the development of two ringroads in Ghyanglekh RM. The first one, which is smaller in size is called **Hayutar Ring Road**. The proposed Hayutar Ring Road passes through following places: Lipekhola – Majhigau – Chalise Khola – Hayutar – Lipekhola. The other and larger ringroad that surrounds a large area of Ghyanglekh is called the **Ghyanglekh Ring Road**. The proposed Ghyanglekh Ring Road passes through following places: Tallo Khattar – Simle Khattar – Hayutar – Koltar – Solabhanjyang – Chaukitar – Belbot – Rampur Bazar – Archale – Rancha – Kagling – Lakhank Chowk – Majhuwatham – Satdobato – Mudedhara – Thakurdada – Amale – Patmas – Tallo Khattar. The proposed roads to be comprised in the ringroads are as following:

Table 15: Roads constituting the ring roads

Ring Road	SN	Road Code	Name of Road Link
Hayutar Ring Road	1	**A001**	Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak
	2	**C003**	Lipekhola dalinbhanjyang majhigau hudai chalise samma sadak
Ghyanglekh Ring Road	1	**A001**	Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak
	2	**A003**	Kapilakot Madhubani Rampur bajar hudai Netrakali Kusheshwor Dumja Sadak
	3	**A005**	Jugepani lakhank chaukidada sadak
	4	**A006**	Rosi gaapaa Pakhurefedi thakurthan archale ratu rancha hudai mahabharat gaapaa sadak
	5	**B001**	Khattar amale hudai Faparchuli sadak
	6	**B002**	Satdobato bastipur hudai faparchuli sadak
	7	**B007**	Matokhani kudule besitol rampur bajar Marin Gaapaa hudai lalbandi motor bato
	8	**B010**	Archale chainpur singpal hudai Jugepani sadak (Kalodhunga/piple samma)
	9	**C001**	Amale Dalludada patamas bukti hudai tallo khattar samma sadak

3.10 Summary of Rural Municipal Road Network

Road inventory survey was conducted through the Rural Municipality as far as possible except the new construction considered. In the inventory survey, the surface condition, width of road, and intervention required were collected. These data are presented in Rural Municipality inventory map. Refer annex of this report for map in detail.

Table 16: Length of Roads based on surface condition

Class	Road Surface/Approx. Length (Km)				
	Concrete	Earthen	Gravelled	New Track	Grand Total
A	-	63.15	19.83	6.89	89.86
B	0.05	78.45	-	18.43	96.93
C	-	52.29	-	4.52	56.81
D	0.03	102.75	-	93.76	196.54
Grand Total	**0.09**	**296.64**	**19.83**	**123.59**	**440.14**

Chapter 4: Rural Municipality Transport Perspective Plan

4.1 Vision

To develop effective, reliable and safe transportation system inside Rural Municipality

4.2 Mission

By utilizing internal and external resources, the Rural Municipality will develop effective transportation infrastructures inside Rural Municipality. The Rural Municipality aims to increase economic standard of public by providing access, minimizing travel time and increasing economic activities inside Rural Municipality

4.3 Objectives:

a. To strengthen major road that connects Rural Municipality with other parts of Nepal
b. To strengthen roads that connects ward centers with Rural Municipal centre
c. To develop effective public transportation system inside Rural Municipality
d. To co-ordinate with provincial government and central government to upgrade strategic roads.

4.4 Threats and Opportunities

a. **Threats and Challenges**:

Although Rural Municipality is mainly focused in developing transportation infrastructures, there are some major threats in achieving goal of Rural Municipality. They are as follows:

1. Limited Financial resources: The construction cost of road infrastructures is too high, whereas, the Rural Municipality has limited resources. There is a probability that the Rural Municipality will not be able to generate financial resources for development of transportation infrastructures as expected.
2. Geography: This Rural Municipality possess difficult geographic features. There are many high hills, steep slopes, land filled with rocks and unstable lands. Constructing roads in such difficult terrain is a challenge to this Rural Municipality.

3. Large number of cross drainage structures: This Rural Municipality possess large number of rivulets and streams which need same amount of cross drainage structures. The increase in number of cross drainage structures will significantly increase the construction cost of road.
4. Migration: Although development works are increasing in this Rural Municipality, the inevitable migration of people from this Rural Municipality is increasing day by day. At some point, there might be a situation that Rural Municipality will complete upgradation of road to some settlements whose population has decreased significantly due to migration. If this scenario occurs, then the investment of Rural Municipality will go in vain.
5. Natural Disaster: Certain parts of this Rural Municipality are prone to landslide and debris flow. Such natural disasters might destroy road infrastructures.

b. Opportunities

In addition to above mentioned threats and challenges, there are some opportunities in development of transportation infrastructure for this Rural Municipality.

1. Self-Decision power: The constitution of Nepal has granted self decision-making power to local governments which allows them to deploy funds to whenever and wherever required.
2. Involvement of local people: Since people are interested in development works happening in their locality, Rural Municipality can involve them in development works. That might be through sharing of funding or sharing of labor.
3. This Rural Municipality is supported by B.P Highway, which passes through the vicinity of this Rural Municipality. It plays a major role in mobility and economics of this Rural Municipality.
4. Availability of Construction Materials: For the construction of road infrastructures, construction materials are locally available in this Rural Municipality. This decreases cost of construction.

4.5 Expected Output

The aim of this Rural Municipal Transport Master Plan is to make Rural Municipality prosperous according to vision set by Rural Municipality. While implementing this RMTMP, following outputs are expected in long and short run:

S. No	Particulars	Unit	Expected Output		
			Base Year 2077/78	Short Term (5 Years)	Long Term (20 Years)
1	Total Length of Road	Km	316.55	440.14	440.14
2	Length of Blacktopped Road	Km	-	60.00	440.14
3	Length of Gravelled Road	Km	19.83	100.00	-
4	Length of Unpaved Road	Km	296.72	280.14	-
5	Road Density	Km/ Sq. Km	1.90	2.64	2.64
6	Road Density	Km/1000 Population	23.17	32.22	32.22
7	No of Motorable Bridges	Nos.	1*	6	21
8	No of Culverts	Nos.	7	30	72
	No of Causeways	Nos.	9	12	14
9	Periodic Maintenance	Km	19.83	160.00	440.14
10	Routine Maintenance	Km	316.55	440.14	440.14
11	Buspark	Nos.	-	1	1
12	Bus Stands	Nos.	-	2	5
13	Helipad	Nos.	-	3	5

Note: *Under Construction

4.6 Data Sources

a. Rural Municipality (Office of the Municipal Executive)

The following data were provided by Rural Municipality

1. Budget of Rural Municipality for Fiscal Year 2077/78
2. Policies and Programs of Rural Municipality
3. Central government and Province government plans overarching in Rural Municipality
4. Existing Road conditions of Rural Municipality
5. Contact details of ward level authorities
6. Information about wards, settlements, routes to reach ward centres

b. Ward-level Office

The following data were provided by Wards of Rural Municipality

1. Number of roads inside ward
2. Tole committees of ward
3. Traffic conditions inside ward,
4. Social organizations/institutions inside ward

c. People of Rural Municipality

Following data was obtained from people of Rural Municipality:

1. Name of each road
2. Population and settlement served by each road
3. Existing width and surface condition of each road
4. Problems faced in transportation sector
5. New tracks that are required to be opened
6. Projects and Plans they are expecting from this RMTMP

4.7 Community Engagement and Consultation

Community engagement was a priority during development of the Rural Municipal Transport Master Plan. Public consultation is also a key component of the Rural Municipal road classification process. For a project to be successful, it must ensure that the appropriate review agencies,Rural Municipal bodies, the public and interested stakeholders are given the opportunity to provide their input in a meaningful way at key points in the study process, ensuring that community issues, needs and priorities are addressed and considered. Both focused and broad consultation activities were used to ensure effective communication throughout the RMTMP development process.

a. Rural Municipal Workshop

Different workshop at Rural Municipality was conducted to seek valuable support and organizational expertise regarding compliance issues and other concerns from the respective jurisdictions. Rural Municipal level workshop with the elected members of Rural Municipality, staffs and other stakeholders occurred at appropriate times throughout the project to ensure no complications arose at the time of approval. One Rural Municipal level workshop was conducted throughout this project.

1. Orientation Workshop

Orientation workshop was held on 20th of Magh, 2077 in the afternoon from 11:00 am to 1:00 Pm. This workshop was conducted to provide information about RMTMP, its procedure, significance and set up long-term and short-term goal. Approximately 24 people attended orientation workshop and provided their valuable suggestions and support to this RMTMP.

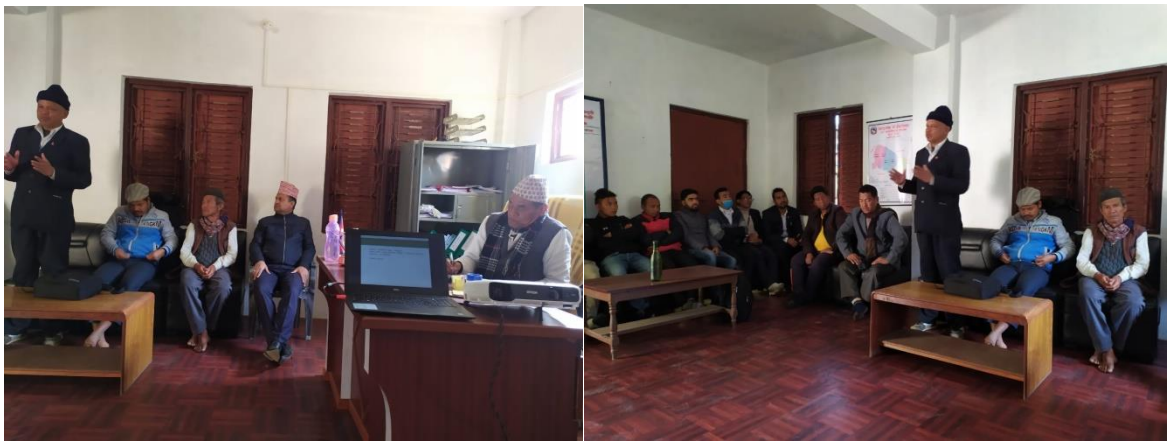


Figure 10: Orientation Workshop

b. Ward Level Workshops

Ward level workshops were conducted to collect existing transportation infrastructure data, view of general public regarding RMTMP and expectations of public from Rural Municipality. This workshop was conducted in all wards in presence of ward presidents, related stakeholders and representatives of consultant. The date and time of ward level workshops are as follows:

S. No.	Ward No.	Date of Workshop	Time	Location
1	1	2077/10/24	01:30 PM to 04:00 PM	Ward Office
2	2	2077/10/20	01:30 PM to 3: 00 PM	Ward Office
3	3	2077/10/23	02:00 PM to 05: 00 PM	Ward Office
4	4	2077/10/22	01:00 PM to 3:30 PM	Ward Office
5	5	2077/10/21	12:30 PM to 3:00 PM	Ward Office

People of this rural municipality enthusiastically involved in those workshops and put forward their problems and needs regarding transportation. In average, 15 people attended ward level workshops. This workshop also decided the Right of Way (RoW) and priority of roads of each ward.

Figure 11: Ward Level Workshop

4.8 Scoring system for screening, grading and prioritization

As the financial resources of Rural Municipality is less as compared to the demand of people there is always conflict among the leaders from different parts for the development of road infrastructure. For this we have to prioritize roads, based on the certain conditions. For this RMTMP, we have adopted the criteria given by the ministry with discussion and minor modification with the concerned stakeholders. Based on these criteria, Rural Municipal and ward roads have been prioritized class wise. The details of prioritization criteria are included in chapter 1 of this report and prioritized roads are shown in Annex with detail of score on each criteria and ranking.

4.9 Possible inter-Rural Municipality/district linkages

According to the District Transport Master Plan (DTMP) of Sindhuli District, two roads of this Rural Municipality are listed as district road core networks (DRCN). Similarly, almost all Rural Municipality level Arterial Roads connect this Rural Municipality with other Rural Municipality. These roads serve as inter-Rural Municipality and district linkages.

4.10 Public Transportation

With the increase of development of infrastructures within the Rural Municipality, the requirement for intra-Rural Municipal public transportation has become mandatory. Although all of these public transportation routes are oriented towards Sindhuli Bazar, they provide significant support to intra-Rural Municipality movement. However, Rural Municipality will require more concrete, effective and efficient public transportation system inside the Rural Municipality in future. To meet this inevitable need, existing public transportation routes should be modified and strengthen while other new routes are assigned based on population, area, expected traffic flow in future and need of local peoples. Such routes are classified in two categories: Primary Transportation Route and Secondary Transportation Route.

Primary Transportation Route:

1. Pipalbhanjyang-Simle-Hayutar-Chaukitar-Belbot-Rampur
2. Kapilakot-Madhubani-Rampur-Belbot-Bandipur-Dumja
3. Rosi Gaapaa-Pakhurefedi-Thakurthan-Rampur-Archale-Ratu-Rancha-Mahabharat GaaPaa
4. Jugepani-Lakhankchowk-Satdobato-Mudedhara-Madanbas

Secondary Transportation Route

1. Tallo Khattar-Patamas-Amale-Simle Khattar-Tallo Khattar
2. Simle Khattar-Amale-Thakurdada-Mudedhara
3. Chandanpur-Salle-Satdobato-Lapse-Rakhal dada-Solabhanjyang-Chandanpur
4. Rampur-Archale-Pipalbhanjyang-Jugepani-Ramveda-Majhuwa-Aakhridada-Bandipur-Gothdada-Aadhamara-Tamajor-Chaukitar-Belbot-Rampur
5. Lipekhola-Majhigau-Challisekhola-Hayutar-Lipekhola (Hayutar Ring Road)

4.11 Road Crashes and Safety Measures

a. Road Crashes

Road crash stands as a major killer in Nepal. On an average, 1,800 people die in road crashes across the country every year. Many crashes go unreported mainly because the parties involved settle the matter themselves. Crashes with minor injury or damage to vehicles are often settled at the crash site and are not reported to police. Only crashes causing human injury are reported.

Figure 12: Road accident near Dhading, which caused 31 casualties (Left), Road Accident in Madi Khola, Pyuthan, causing 18 casualties.

Nearly 75 per cent of the crashes are attributed to negligence of drivers. In 2016-17 drivers' negligence caused 7,487 road crashes out of which 1,392 were due to speeding, 288 due to drink driving, 376 due to recklessness of passengers, 213 while overtaking vehicles, 149 because of mechanical failure, 33 overload, 31 stray cattle, 94 poor road condition and 15 bad weather.

Figure 13: Overloaded vehicle

Source: The Kathmandu Post

According to the Ministry of Health, road crash (7 per cent) is the fourth leading cause of death after infectious diseases, child and maternal mortality (42 per cent), cardiovascular diseases (25 per cent) and cancer (11 per cent) in Nepal.

b. Safety Measures

The basic strategy of a Safe System approach is to ensure that in the event of a crash, the impact energies remain below the threshold likely to produce either death or serious injury. This threshold

will vary from crash scenario to crash scenario, depending upon the level of protection offered to the road users involved. Five pillars have been identified to reduce the risk of crashes inside Rural Municipality.

i. Road Safety Management

The first and foremost step to reduce the risk of crashes is to formulate and implement road safety measures. Government of Nepal has formulated several rules and regulations regarding traffic operations and safety. The Rural Municipality should implement those rules inside Rural Municipality so as to reduce the loss of life and property. Similarly, the Rural Municipality should train related stakeholders about traffic safety, rules, regulations and acts regarding traffic operations.

ii. Safe Road and Mobility

The road infrastructures and mobility of vehicles should be safe so as to reduce the risk of crashes. The construction of roads should be followed by provision of roadside safety structures. Implementation of this procedure must begin from arterial roads and gradually should cover all roads inside Rural Municipality. Roadside safety can be increased significantly by applying some common and cost-effective safety measures.

i. Bio- Engineering

Though roads serve as lifelines for many communities, they also cause environmental degradation in the forms of erosion, shallow landslides, and river sedimentation. As a solution, “eco-safe roads,” or those that incorporate soil bioengineering techniques to minimise negative environmental impacts, can significantly reduce economic losses and environmental degradation, and even enhance local livelihoods.

Figure 14: Bio-Engineering Works

ii. Traffic Signs

Each of Arterial Roads and Major Market/Places need traffic safety signs for both the motorist and the people who are using the same roadways. Bright, eye-catching signs are a must because people are moving rapidly by them and they only have a few seconds on average to read and comprehend them. They should also be very clear and easy for everyone to understand. These traffic safety signs have the potential to save lives and reduce accidents.

Figure 15: Traffic Signs

iii. Road Marking

Installing road markings in visible and understandable condition is vital for road safety. They help road users to navigate the road systems, making us aware of upcoming hazards and of key bits of information to help us drive appropriately for the situation. The reliance on these features cannot be exaggerated, and without their clarity, it can cause confusion on the roads. Road markings are especially important at nighttime when, in the dark conditions, we rely on their presence even more so.

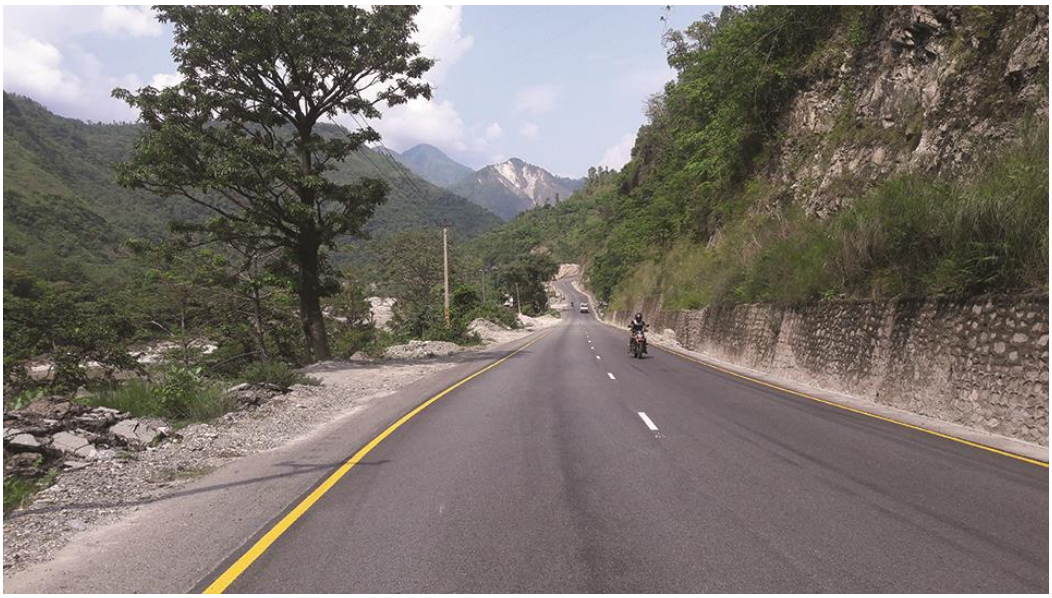


Figure 16: Road Markings on Narayanghat-Muglin Road

Source: Nagariknews

iv. Traffic Calming

Physical obstructions meant to slow down and possibly divert vehicles in residential areas are called traffic calming devices. More generally, it can be referred as changing a road in an attempt to lower vehicle speeds, reduce traffic volumes, divert cut-through traffic, or some combination therein.

Some Traffic Calming Measures

1	Angled Slow Points	12	Raised Crosswalks
2	Center Islands	13	Raised Intersections
3	Chicanes	14	Realigned Intersections
4	Chokers	15	Reduced Intersection Turning Radius
5	Diverters/Diagonal Barriers	16	Roundabouts

6	Full Closures	17	Speed Humps
7	Half Closures	18	Speed Tables
8	Intersection Neckdowns	19	Striped Bicycle Lanes to Narrow the Drive Lanes
9	Mid-Block Bulb-Outs	20	Textured Pavement
10	Median Barriers	21	Traffic Circles
11	Neckdowns	22	

Figure 17: Traffic Calming Using: Speed Bump (left), Obstacles (Right)

v. Bus Bays

A branch from or widening of a road that permits buses to stop, without obstructing traffic, while laying over or while passengers board and alight; also known as a blister, duckout, turnout, pullout, pull-off or lay-by.

Figure 18: Bus Bay

Photo: NTA, Ireland

iii. Safe Vehicles

Another important factor to reduce traffic crashes is to make vehicles safe and sound. The vehicles operating inside Rural Municipality should be as per standard set by Government of Nepal. Similarly, Rural Municipality should start route provision procedure to operate public vehicles inside and to/from Rural Municipality. Similarly, Rural Municipality should provide basic incentives to promote in-vehicles safety features, provide basic vehicle repair and maintenance trainings. Likewise, Rural Municipality should investigate crashes occurred and implement the recommendation of investigation.

Figure 19: Pollution Caused by Old vehicles

iv. Safe Road Users

To reduce road crashes, road users must be safe themselves. Rural Municipality should strictly implement the provision of using seatbelts, and helmets while driving. Similarly, the Rural Municipality should conduct awareness campaign to provide knowledge about proper use of road infrastructures. Similarly, driving license must be made compulsory for driving. Likewise, there must be provision of driving training centres and capacity enhancement.

v. Post-Crash Response

Although we can minimize traffic crashes, we can not totally abolish road crashes. For this reason, we should prepare for quick post-crash response to reduce the effect of crashes. For quick rescue in case of a crash, the Rural Municipality should have provision of:

- Toll-Free number for emergencies
- Ambulance facility
- Primary treatment facility within 30 minutes
- Necessary fund to aid victims of accidents
- Alternative routes for mobility

Chapter 5: Capital Programming

4.1 Timing and Priorities

To help guide the Rural Municipality in implementing the infrastructure plans recommended in the RMTMP, a suggested timing for projects has been developed based on a technical assessment that considered a number of key elements, such as, capacity needs, connectivity and compatibility with other Rural Municipal objectives and plans. The table below presents a summary of the recommended mid to long term roadway improvements and the estimated timetable for their implementation. The plan focuses on improvements of major Rural Municipal roads, accessibility to services and connectivity to other parts of country.

Urban Development Strategy 2015 aims to pave 50% of the Rural Municipal roads by the end of 2031AD for New Rural Municipalities and this RMTMP has planned to pave **all roads** within the perspective period of 20 years i.e. by the year of 2041AD in its **full width**.

The timing for the improvements shown in table in below has been based on the results of the transportation analysis and a staging of the works to balance the financial impact over time.

Table 17: Timing and Priorities of Programs

S. No.	Plan	Year	Term	Improvement Type
1	Upgrading Road Connecting Rural Municipal Office	2021-2023	Immediate	Gravelling
2	Upgrading Road Connecting ward Office	2021-2023	Immediate	Gravelling
3	Upgrading Road Connecting Rural Municipal Office	2023-2026	Short Term	Blacktopping
4	Upgrading Road Connecting ward Office	2023-2026	Short Term	Blacktopping
5	Construction of at least two helipads	2021-2026	Short Term	New Construction
6	Upgrading tracks connecting all settlements	2023-2031	Mid-Term	Gravelling
7	Upgrading tracks connecting all settlements	2026-2031	Mid-Term	Blacktopping
8	Upgrading Class A and B roads to full extent	2031-2041	Long- Term	Widening/Blacktopping
9	Construction of helipad in all ward centres	2031-2041	Long- Term	New Construction
10	Construction of Bus Park with terminal	2031-2041	Long- Term	New Construction

4.2 Financial Analysis

The Rural Municipality should continue to monitor available provincial and federal funding programs to establish if any of the recommended improvements identified in this RMTMP will be eligible. Ultimately, the most reliable and consistent sources of funding for transportation system improvements will be the annual development budget of Rural Municipality.

For the financial requirement, the rate of different interventions as given by the ToR is used. For the financial planning the following assumptions are made:

- 20% of length of road requires retaining wall on hill and valley side and the cross section of retaining is taken as 1.5 square meter
- 30% of the length of road requires gabion wall and the cross section of gabion is taken as 1 square meter
- full length of road requires longitudinal drainage structures
- Financial capacity of Rural Municipality increases by 10% each year

The table below presents a summary of the estimated costs to construct the recommended mid to long term transportation improvements. Construction costs for the road improvement have been estimated using unit costs provided by Department of Urban Development and Building Construction (DUDBC).

Table 18: Estimated Cost of Programs Featured in this RMTMP

S. No.	Project	Required Capital
1	Upgrading all roads inside rural municipality with necessary infrastructures	10,900,082,342
2	Maintenance of all roads	4,671,471,000
3	Construction of Bus Park with bus terminal	20,000,000
4	Construction of Bus Stands (1 in each ward)	15,000,000
5	Construction of Helipad for emergency (1 in each ward)	15,000,000
6	Installation of traffic signals at 10 locations	15,000,000
7	Traffic Safety and Signs	3,000,000
8	Road Safety education	3,000,000
Total		**15,642,553,342**

Based on this rate of item and total required interventions, a total of approximately 1564.26 crore of Nepalese rupees is projected to be required to develop transportation infrastructure and maintain them. For this, the assumption made is that the financial capacity of Rural Municipality increases by 10% each year. These costs will change slightly as the roads are improved and the standard costs change. This should be updated on annual basis.

4.3 Funding the Program

The cost of transportation infrastructure development and management is significantly higher than the capacity of Rural Municipality. For implementation of this RMTMP, Rural Municipality needs a capital of approximately **1564.26 crore** Nepalese rupees. However, the potential of Rural Municipality to invest in transportation infrastructure is **572.75 crore** Nepalese rupees (considering 25% of total capital of Rural Municipality and that capital of Rural Municipality increases by 10 percent each year) over twenty years period of time. The budget allocation for Construction and Maintenance of all roads inside rural municipality for 20 years period is shown in following table.

Table 19: Financial Requirement and Capacity of Rural Municipality

Year	Amount in Thousands		
	Required Capital	Capacity of Rural Municipality	Deficit in Capital
1	271,871	100,000	171,871
2	299,063	110,000	189,063
3	328,966	121,000	207,966
4	361,863	133,100	228,763
5	398,051	146,410	251,641
6	437,857	161,051	276,806
7	481,643	177,156	304,487
8	529,806	194,872	334,934
9	582,786	214,359	368,427
10	641,063	235,795	405,268
11	705,171	259,374	445,797
12	775,686	285,312	490,374
13	853,257	313,843	539,414
14	938,580	345,227	593,353
15	1,032,440	379,750	652,690
16	1,135,686	417,725	717,961
17	1,249,251	459,497	789,754
18	1,374,177	505,447	868,730
19	1,511,594	555,992	955,602
20	1,662,757	611,591	1,051,166
Total	**15,571,568**	**5,727,500**	**9,844,068**

The Rural Municipality needs to find sources for another **984.41 crore** Nepalese rupees for construction and maintenance of all roads inside rural municipality and **991.51 crore** Nepalese rupees for overall infrastructure development from different sources. The Rural Municipality should collaborate with federal government, province government and private sectors. Similarly, involving people in development works would help to generate revenue for infrastructure development. Likewise, Rural Municipality should increase their internal income through different income generating activities.

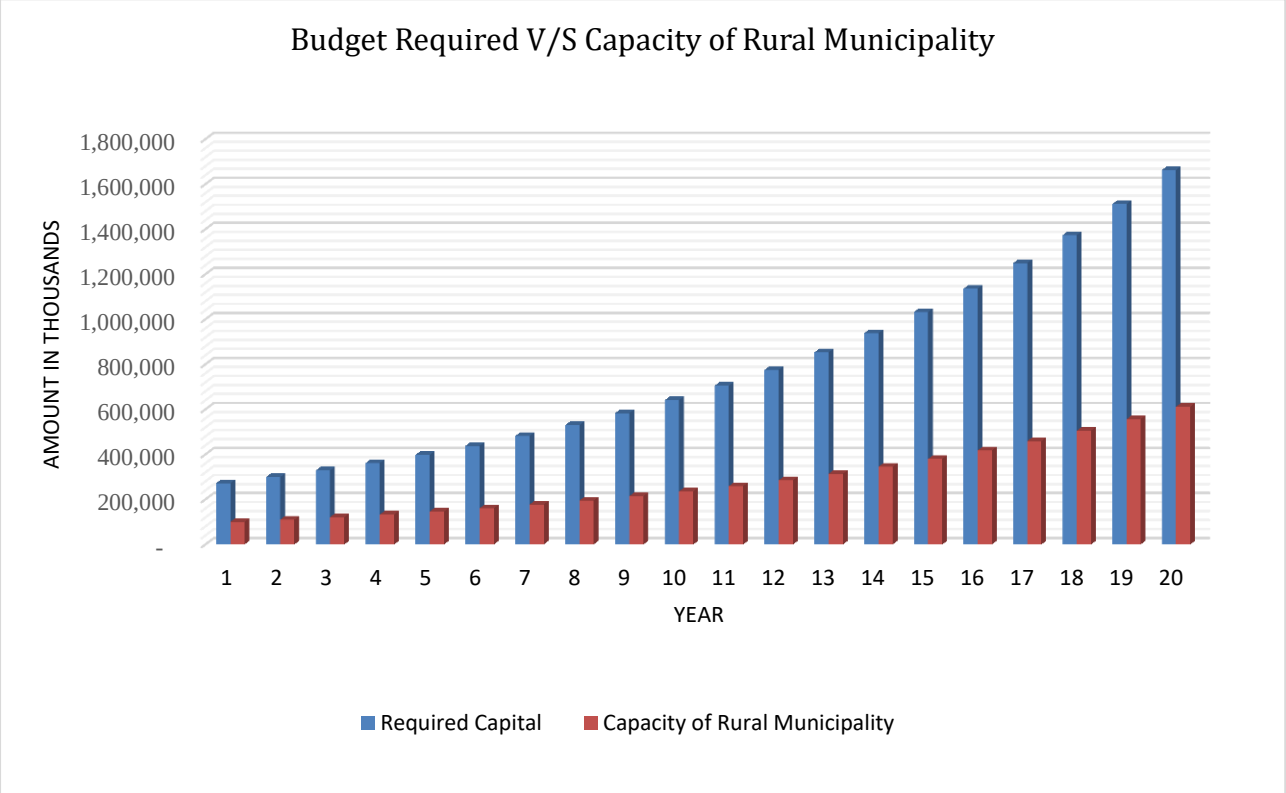


Figure 20: Required Capital vs Capacity of Rural Municipality

4.4 Scoring and Ranking of Rural Municipal Roads

As the financial resources of Rural Municipality is less as compared to the demand of people there is always conflict among the leaders from different parts for the development of road infrastructure. For this we have to prioritize roads, based on the certain conditions. For this RMTMP, we have adopted the criteria given by the ministry with discussion and minor modification with the concerned stakeholders. Based on these criteria, Rural Municipal and ward roads have been prioritized class-wise. The details of prioritization criteria are included in chapter 1 of of this report and prioritized roads are shown in table with detail of score and ranking.

Table 20: Score and Ranking of Rural Municipal Roads

Road Code	Road Name	Road Length (Km)	Score	Class wise Rank	Overall Rank
A001	Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak	24.90	48.42	6	85
A002	Mudedhara madanbas krisi sadak	3.82	35.65	7	102
A003	Kapilakot Madhubani Rampur bajar hudai Netrakali Kusheshwor Dumja Sadak	26.37	71.45	3	27
A004	Bandipur gope ramvede jugepani sadak	9.10	76.94	1	22
A005	Jugepani lakhank chaukidada sadak	5.40	75.94	2	23
A006	Rosi gaapaa Pakhurefedi thakurthan archale ratu rancha hudai mahabharat gaapaa sadak	17.15	70.55	4	28
A007	Archale Kanflongdong Hattiaahal dekhi rancha motor bato	3.13	48.45	5	63
B001	Khattar amale hudai Faparchuli sadak	16.43	55.65	9	54
B002	Satdobato bastipur hudai faparchuli sadak	6.41	99.00	2	2
B003	Chandanpur dekhi satdobato main sadak	12.19	100.00	1	1
B004	Solabhanjyang chilaune pachghare lapse hudai satdobato sadak	13.06	64.86	6	32
B005	Rampur bhaisefat chhabise chaukitar sadak	6.14	71.50	3	26
B006	Kalikhola bokse hudai katauche madhubani jodne sadak	4.66	56.94	8	39
B007	Matokhani kudule besitol rampur bajar Marin Gaapaa hudai lalbandi motor bato	2.50	64.45	7	33
B008	Ramvede fedi gope hudai kamitol jodne sadak	2.45	53.60	10	58
B009	Thakuridada Paharilekh Jugepani sadak	10.26	65.45	5	31
B010	Archale chainpur singpal hudai Jugepani sadak (Kalodhunga/piple samma)	18.10	66.45	4	30
B011	Dothe Rancha sadak	0.95	48.45	11	63
B012	Singpal Paharilekh Jugepani sadak	3.77	48.45	11	63
C001	Amale Dalludada patamas bukti hudai tallo khattar samma sadak	7.76	54.65	12	55
C002	Mudedhara Bachheutar hudai madanbas sadak	7.02	51.65	14	62

Road Code	Road Name	Road Length (Km)	Score	Class wise Rank	Overall Rank
C003	Lipekhola dalinbhanjyang majhigau hudai chalise samma sadak	2.63	98.00	1	3
C004	Swara aahaldada hudai ookhle samma sadak	3.53	97.00	2	4
C005	Bhaise dekhi godre hudai bastipur jane bato	3.75	96.00	3	5
C006	Tamajor gothdada bhanjyang sadak	6.48	70.53	6	29
C007	Gope mabi dekhi pakhure fedi garke sadak	5.54	74.94	4	24
C008	Narkate tallo aahale hudai mathillo aahale Sadak	3.33	56.94	8	39
C009	Aapdada Barabise sadak	2.27	56.94	8	39
C010	Simle fedi dekhi health post hudai sahakari dada jodne sadak	1.67	56.94	7	38
C011	Damaidada magardada sadak	2.17	56.94	8	39
C012	Bhaise rampur sadak	1.86	56.94	8	39
C013	Swayuridada Pahirodada jhagaredada jyamiredada hudai rampur sadak	5.73	72.94	5	25
C014	Pahiro bhanjyang bhorthum kudule rampur bazar sadak	3.06	53.50	13	59
D001	Simle pari hudai dhanamana samma sadak	4.54	35.65	79	102
D002	Jyamire simle sadak	1.75	35.65	79	102
D003	Bukti nayagau sadak	0.80	35.65	79	102
D004	Acharya dada simle sadak	2.05	35.65	79	102
D005	Simle vwose hudai patmas sadak	3.73	35.65	79	102
D006	Amale bhanjyang vwose dada sadak	1.10	35.65	79	102
D007	Mahintar sadak	1.04	35.65	79	102
D008	Thalagau koltar hudai patamas sadak	3.09	52.65	37	60
D009	Koltar hudai walding school	0.74	35.65	79	102
D010	Koltar bachheutar sadak	2.63	35.65	79	102

Road Code	Road Name	Road Length (Km)	Score	Class wise Rank	Overall Rank
D011	Thalagau langdi bachheutar sadak	3.73	35.65	79	102
D012	Sunuwar tol langdi sadak	0.27	35.65	79	102
D013	Sunuwar tol langdi terso sadak	0.95	35.65	79	102
D014	Ambote sadak	0.87	35.65	79	102
D015	Amale mabi jane bato	0.17	35.65	79	102
D016	Amale woda karyalaye hudai biribas jane sadak	2.09	35.65	79	102
D017	Jogitar hudai ghattekhola samma sadak	0.54	35.65	79	102
D018	Khattar bajhkhet hudai bajardada sadak	1.98	35.65	79	102
D019	Simle khattar hudai bajar dada sadak	0.44	35.65	103	127
D020	Mathillo khattar sukachuri dote hudai charchare mudedhara sadak	12.13	53.65	36	57
D021	Dhondurdada biribas sadak	2.74	35.65	79	102
D022	Sukachuri tunibhanjyang sadak	1.83	35.65	79	102
D023	Tunibhanjyang virgau sadak	1.21	35.65	79	102
D024	Dote faparchuli sadak	1.82	35.65	79	102
D025	Rajabas bajardada klose hudai marin khola sadak	1.60	35.65	79	102
D026	Tunibhanjyang gopedada klose hudai marin khola sadak	2.71	35.65	79	102
D027	Tunibhanjyang besitol hudai school samma sadak	1.29	35.65	79	102
D028	Dalinbhyanjang dekhi lipedada sadak	1.00	80.00	2	7
D029	Chiurebas jane bato	3.46	80.00	2	7
D030	Hayutar hudai Nepal SBI bank jane bato	0.48	80.00	2	7
D031	Woda karyalaye 2 jane bato	0.17	80.00	2	7
D032	Hayutar hirding sadak	1.63	80.00	2	7

Road Code	Road Name	Road Length (Km)	Score	Class wise Rank	Overall Rank
D033	Gaapaa Jane bato	0.19	80.00	2	7
D034	Aapdada Sano Bhakteni hudai thulo bhakteni jane sadak	2.89	80.00	2	7
D035	Chandanpur Khola gau sadak	4.70	80.00	2	7
D036	Salle dekhi marin khola sadak	1.62	80.00	2	7
D037	Bhaise pradhantol hudai charghare sadak	1.56	80.00	2	7
D038	Satdobato dekhi bastipur sadak	1.46	80.00	1	6
D039	Bhaise dekhi aadheri samma sadak	1.72	80.00	2	7
D040	Satdobato dekhi aadheri samma sadak	1.52	80.00	2	7
D041	Lapse aadheri vaise sadak	1.79	61.38	22	37
D042	Lapse magardada hudai majhuwatham jane sadak	3.94	61.86	21	36
D043	Koltar gurase sambhudada sadak	3.55	45.86	54	78
D044	Gurase kami basti sadak	0.46	45.86	54	78
D045	Koltar ratu khola kalisir sadak	2.27	45.86	54	78
D046	Koltar katle sadak	1.17	45.86	54	78
D047	Mahila bhawan jane bato	0.07	80.00	2	7
D048	Krisi sakha karyelaye jane bato	0.07	80.00	2	7
D049	Kerabari school jane bato	0.21	80.00	2	7
D050	Solabhanjyang dodh hudai sirise Ghising dada jane sadak	3.19	45.86	54	78
D051	Sirise marin khola sadak	1.09	45.86	54	78
D052	Tinghare bhatmas dada sadak	0.41	45.86	54	78
D053	Pachghare vedekharka sadak	0.82	45.86	54	78
D054	Tamajor Bhadaure kholsi dekhi keuraghari hudai pachghare dhunge samma sadak	5.07	63.86	19	34

Road Code	Road Name	Road Length (Km)	Score	Class wise Rank	Overall Rank
D055	Pachghare bisauni dada sadak	0.40	45.86	54	78
D056	Tamajor sirantol dekhi pachghare fedi sadak	0.93	45.86	54	78
D057	Tamajor Sombare pachabhaiya sadak	2.25	45.86	54	78
D058	Tamajor red cross vawan hudai rato dada sadak	0.62	45.86	54	78
D059	Tamajor khola hudai chilaune dada sadak	3.34	45.86	54	78
D060	Chaukitar chilaune dada sadak	1.17	45.86	54	78
D061	Chaukitar jagajite dada sadak	0.64	45.86	54	78
D062	Solobhanjyang Mathillo aahale sadak	2.21	45.86	54	78
D063	Mathillo aahale kalikhola sadak	1.77	45.86	54	78
D064	Aahale masanghat sadak	1.57	56.94	23	39
D065	Chaukitar Sirutar sarpakhop sadak	1.24	56.94	23	39
D066	Chhabise Kapase sadak	0.47	56.94	23	39
D067	Kerabari sadak	1.18	45.86	54	78
D068	Baghmara manepakha barelidada hudai kerabari sadak	1.27	45.86	54	78
D069	Tamajor varrafedi dekhi baghmara sadak	0.53	45.86	54	78
D070	Netrakali mabi talkudada baghmare hudai dhaden aarubot sadak	3.99	62.86	20	35
D071	Tamajor baghmara sadak	0.31	45.86	54	78
D072	Talkudada sadak	0.31	45.86	54	78
D073	Sirantol swasthe chauki jane sadak	0.21	45.86	54	78
D074	Tekanpur baseni kholaghari sadak	2.53	45.86	54	78
D075	Jure aadhamara sadak	2.34	56.94	23	39
D076	Simhayutar muldada hudai pahiro bhanjyang sadak	3.22	56.94	23	39

Road Code	Road Name	Road Length (Km)	Score	Class wise Rank	Overall Rank
D077	Gothdada ghising tol sadak	0.87	56.94	23	39
D078	Chaukidada goth dada sadak	2.15	56.94	23	39
D079	Majhuwa thumka dekhi barabhise sadak	2.70	56.94	23	39
D080	Lakhank teenghare majhuwa sadak	3.55	56.94	23	39
D081	Dothe dekhi puchhartol hudai pakhuri jodne sadak	1.91	56.94	23	39
D082	Bandipur gau dekhi thansing dada sadak	2.90	51.79	38	61
D083	Bhorthum bagartol sadak	2.54	54.35	35	56
D084	Charghare motor bato	0.63	48.45	39	63
D085	Ghatteswara paktungdada hudai dothe motor bato	2.25	48.45	39	63
D086	Garke ramailo basti hudai rampur dada motor bato	3.04	48.45	49	75
D087	Pakhurefedi devithan hudai paharilekh motor bato	2.38	48.45	49	75
D088	Khanikhola kharibot dothe motor bato	1.58	48.45	39	63
D089	Rampur khanikhola gyandada chainpur motor bato	3.80	48.45	39	63
D090	Jogidada sandhane motor bato	0.74	48.45	39	63
D091	Singpal ranagau motor bato	1.39	48.45	39	63
D092	Kolbote dakshinkali motor bato	1.06	48.45	39	63
D093	Pipalbhyanjang dakshinkali motor bato	3.15	48.45	39	63
D094	Ratudovan hudai budumchuli motor bato	3.99	48.45	39	63
D095	Bastipur hudai kaule baseri motipur sadak	4.47	80.00	2	7
D096	Tallo gaira magar tol jodne sadak	0.81	80.00	2	7
D097	Tamajor kholaghari majhuwa motor bato	4.09	45.86	54	78
D098	Charghare motor bato	1.01	56.94	23	39

Road Code	Road Name	Road Length (Km)	Score	Class wise Rank	Overall Rank
D099	Bandipur sauradada keraubari pipalbot sadak	3.38	56.94	23	39
D100	Darigau dothe motor bato	2.41	48.45	49	75
D101	Rampur bazar darigau motor bato	1.33	48.45	49	75
D102	Ratu saitar motor bato	0.87	48.45	39	63
D103	Barbare motor bato	0.76	48.45	49	75

4.5 Maintenance and Improvement of Roads

i. Maintenance

Maintenance refers to the actions required to repair a road and keep it in good and passable condition. For RMTMP planning purposes, standard costs per kilometre for each maintenance type are applied to the entire road network, whereby for certain maintenance type's distinction is made according to the surface type of the road. Maintenance activities include:

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 lump sum is reserved for the entire road 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.

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 road network. The specific requirements for routine maintenance are determined on an annual basis through the road condition survey.

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 Rural Municipal road 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.

Periodic maintenance - Larger repairs to the road largely aimed at renewing the road surface through re-gravelling, resealing or overlays. It is generally carried out with several years interval. Although periodic maintenance is only required for specific sections of the road network, a lump sum allocation is made for the entire road 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.

The length of roads in km to be included under each Maintenance type for the first year is indicated below.

Table 21: Length of road for maintenance work

Road Code	Length of road in km for maintenance (Km)				
	Emergency	Routine	Recurrent (earthen)	Recurrent (Gravelled)	Periodic (Gravelled)
A001	24.90	24.90	5.07	19.83	19.83
A002	3.82	3.82	3.82	-	-
A003	26.37	26.37	26.37	-	-
A004	9.10	9.10	8.20	-	-
A005	5.40	5.40	5.40	-	-
A006	17.15	17.15	13.62	-	-
A007	3.13	3.13	0.67	-	-
B001	16.38	16.38	16.38	-	-
B002	6.41	6.41	2.36	-	-
B003	12.19	12.19	12.19	-	-
B004	13.06	13.06	12.52	-	-
B005	6.14	6.14	4.78	-	-
B006	4.66	4.66	1.30	-	-
B007	2.50	2.50	0.55	-	-
B008	2.45	2.45	-	-	-
B009	10.26	10.26	10.26	-	-
B010	18.10	18.10	18.10	-	-
B011	0.95	0.95	-	-	-
B012	3.77	3.77	-	-	-
C001	7.76	7.76	7.76	-	-
C002	7.02	7.02	7.02	-	-
C003	2.63	2.63	2.63	-	-
C004	3.53	3.53	1.46	-	-
C005	3.75	3.75	3.75	-	-
C006	6.48	6.48	6.48	-	-
C007	5.54	5.54	5.54	-	-
C008	3.33	3.33	2.09	-	-
C009	2.27	2.27	2.27	-	-

Road Code	Length of road in km for maintenance (Km)				
	Emergency	Routine	Recurrent (earthen)	Recurrent (Gravelled)	Periodic (Gravelled)
C010	1.67	1.67	1.07	-	-
C011	2.17	2.17	1.56	-	-
C012	1.86	1.86	1.86	-	-
C014	5.73	5.73	5.73	-	-
D001	3.06	3.06	3.06	-	-
D002	4.54	4.54	-	-	-
D003	1.75	1.75	1.16	-	-
D004	0.80	0.80	0.80	-	-
D005	2.05	2.05	0.21	-	-
D006	3.73	3.73	3.73	-	-
D007	1.10	1.10	-	-	-
D008	1.04	1.04	-	-	-
D009	3.09	3.09	1.85	-	-
D010	0.74	0.74	-	-	-
D011	2.63	2.63	-	-	-
D012	3.73	3.73	3.73	-	-
D013	0.27	0.27	-	-	-
D014	0.95	0.95	-	-	-
D015	0.87	0.87	0.87	-	-
D016	0.17	0.17	0.17	-	-
D017	2.09	2.09	0.13	-	-
D018	0.54	0.54	-	-	-
D020	1.98	1.98	-	-	-
D021	0.44	0.44	-	-	-
D022	12.13	12.13	8.27	-	-
D024	2.74	2.74	2.74	-	-
D025	1.83	1.83	-	-	-
D026	1.21	1.21	-	-	-
D027	1.82	1.82	-	-	-

Road Code	Length of road in km for maintenance (Km)				
	Emergency	Routine	Recurrent (earthen)	Recurrent (Gravelled)	Periodic (Gravelled)
D028	1.60	1.60	-	-	-
D029	2.71	2.71	-	-	-
D031	1.29	1.29	-	-	-
D033	1.00	1.00	1.00	-	-
D034	3.46	3.46	3.46	-	-
D035	0.44	0.44	0.44	-	-
D036	0.17	0.17	0.17	-	-
D037	1.63	1.63	1.63	-	-
D038	0.19	0.19	0.19	-	-
D039	2.89	2.89	2.89	-	-
D040	4.70	4.70	4.70	-	-
D041	1.62	1.62	1.62	-	-
D042	1.56	1.56	1.56	-	-
D043	1.46	1.46	1.46	-	-
D045	1.72	1.72	1.20	-	-
D046	1.52	1.52	1.52	-	-
D047	1.79	1.79	-	-	-
D048	3.94	3.94	3.22	-	-
D049	3.55	3.55	2.77	-	-
D050	0.46	0.46	0.46	-	-
D051	2.27	2.27	1.25	-	-
D052	1.17	1.17	0.84	-	-
D053	0.07	0.07	0.07	-	-
D054	0.07	0.07	0.07	-	-
D055	0.21	0.21	0.21	-	-
D056	3.19	3.19	2.66	-	-
D057	1.09	1.09	-	-	-
D058	0.41	0.41	-	-	-
D059	0.82	0.82	-	-	-

Road Code	Length of road in km for maintenance (Km)				
	Emergency	Routine	Recurrent (earthen)	Recurrent (Gravelled)	Periodic (Gravelled)
D060	5.07	5.07	5.07	-	-
D062	0.40	0.40	-	-	-
D063	0.93	0.93	-	-	-
D065	2.25	2.25	-	-	-
D066	0.62	0.62	0.53	-	-
D067	3.34	3.34	3.34	-	-
D068	1.17	1.17	-	-	-
D069	0.64	0.64	0.64	-	-
D070	2.21	2.21	2.21	-	-
D071	1.77	1.77	-	-	-
D072	1.57	1.57	0.45	-	-
D073	1.24	1.24	0.51	-	-
D074	0.47	0.47	0.47	-	-
D075	1.18	1.18	0.92	-	-
D076	1.27	1.27	0.81	-	-
D077	0.53	0.53	-	-	-
D078	3.99	3.99	3.99	-	-
D079	0.31	0.31	-	-	-
D080	0.31	0.31	0.31	-	-
D081	0.21	0.21	0.21	-	-
D082	2.53	2.53	-	-	-
D083	2.34	2.34	-	-	-
D084	3.22	3.22	1.66	-	-
D085	0.87	0.87	0.87	-	-
D086	2.15	2.15	2.15	-	-
D087	2.70	2.70	0.94	-	-
D088	3.55	3.55	1.49	-	-
D089	1.91	1.91	-	-	-
D090	2.90	2.90	-	-	-

Road Code	Length of road in km for maintenance (Km)				
	Emergency	Routine	Recurrent (earthen)	Recurrent (Gravelled)	Periodic (Gravelled)
D091	2.54	2.54	0.85	-	-
D092	0.63	0.63	0.63	-	-
D093	2.25	2.25	-	-	-
D094	3.04	3.04	3.04	-	-
D095	2.38	2.38	-	-	-
D096	1.58	1.58	1.58	-	-
D097	3.80	3.80	3.80	-	-
D099	0.74	0.74	0.74	-	-
D100	1.39	1.39	0.99	-	-
D101	1.06	1.06	1.06	-	-
D102	3.15	3.15	2.28	-	-
D103	3.99	3.99	3.40	-	-

Table 22: Cost of maintenance for first year of RMTMP in thousands

Road Code	Maintainance Cost in Thousands				
	Emergency	Routine	Recurrent (Earthen)	Recurrent (Gravelled)	Periodic (Gravelled)
A001	1,281	854	2,174	13,595	8,497
A002	196	131	1,635	-	-
A003	1,130	753	9,418	-	-
A004	468	312	3,515	-	-
A005	232	154	1,930	-	-
A006	735	490	4,863	-	-
A007	188	125	336	-	-
B001	1,123	749	9,362	-	-
B002	247	165	759	-	-
B003	627	418	5,224	-	-
B004	783	522	6,260	-	-
B005	158	105	1,025	-	-
B006	120	80	279	-	-
B007	86	57	157	-	-
B008	63	42	-	-	-
B009	528	352	4,398	-	-
B010	465	310	3,879	-	-
B011	49	33	-	-	-
B012	194	129	-	-	-
C001	532	355	4,437	-	-
C002	481	321	4,010	-	-
C003	135	90	1,129	-	-
C004	151	101	520	-	-
C005	193	129	1,608	-	-
C006	278	185	2,315	-	-
C007	238	158	1,980	-	-
C008	143	95	747	-	-
C009	97	65	809	-	-

Road Code	Maintainance Cost in Thousands				
	Emergency	Routine	Recurrent (Earthen)	Recurrent (Gravelled)	Periodic (Gravelled)
C010	71	48	382	-	-
C011	112	74	668	-	-
C012	64	42	531	-	-
C014	393	262	3,273	-	-
D001	131	88	1,095	-	-
D002	117	78	-	-	-
D003	60	40	330	-	-
D004	41	27	342	-	-
D005	53	35	45	-	-
D006	96	64	799	-	-
D007	28	19	-	-	-
D008	36	24	-	-	-
D009	80	53	396	-	-
D010	19	13	-	-	-
D011	68	45	-	-	-
D012	96	64	798	-	-
D013	7	5	-	-	-
D014	41	27	-	-	-
D015	45	30	371	-	-
D016	4	3	36	-	-
D017	72	48	37	-	-
D018	18	12	-	-	-
D020	51	34	-	-	-
D021	11	8	-	-	-
D022	312	208	1,772	-	-
D024	94	63	782	-	-
D025	94	63	-	-	-
D026	41	28	-	-	-
D027	62	42	-	-	-

Road Code	Maintainance Cost in Thousands				
	Emergency	Routine	Recurrent (Earthen)	Recurrent (Gravelled)	Periodic (Gravelled)
D028	55	37	-	-	-
D029	93	62	-	-	-
D031	44	29	-	-	-
D033	34	23	285	-	-
D034	118	79	987	-	-
D035	15	10	126	-	-
D036	6	4	47	-	-
D037	70	46	581	-	-
D038	6	4	54	-	-
D039	99	66	826	-	-
D040	161	107	1,343	-	-
D041	56	37	463	-	-
D042	54	36	447	-	-
D043	50	33	417	-	-
D045	59	39	344	-	-
D046	52	35	434	-	-
D047	61	41	-	-	-
D048	135	90	921	-	-
D049	122	81	790	-	-
D050	16	10	130	-	-
D051	78	52	356	-	-
D052	40	27	239	-	-
D053	2	1	19	-	-
D054	2	2	20	-	-
D055	7	5	61	-	-
D056	109	73	759	-	-
D057	38	25	-	-	-
D058	21	14	-	-	-
D059	42	28	-	-	-

Road Code	Maintainance Cost in Thousands				
	Emergency	Routine	Recurrent (Earthen)	Recurrent (Gravelled)	Periodic (Gravelled)
D060	217	145	1,810	-	-
D062	21	14	-	-	-
D063	32	21	-	-	-
D065	116	77	-	-	-
D066	32	21	228	-	-
D067	143	95	1,191	-	-
D068	50	33	-	-	-
D069	27	18	229	-	-
D070	95	63	791	-	-
D071	76	50	-	-	-
D072	54	36	129	-	-
D073	42	28	145	-	-
D074	24	16	201	-	-
D075	50	34	327	-	-
D076	44	29	233	-	-
D077	23	15	-	-	-
D078	171	114	1,423	-	-
D079	13	9	-	-	-
D080	16	11	131	-	-
D081	11	7	88	-	-
D082	130	87	-	-	-
D083	100	67	-	-	-
D084	110	74	475	-	-
D085	45	30	373	-	-
D086	92	61	768	-	-
D087	116	77	335	-	-
D088	152	102	533	-	-
D089	82	55	-	-	-
D090	124	83	-	-	-

Road Code	Maintainance Cost in Thousands				
	Emergency	Routine	Recurrent (Earthen)	Recurrent (Gravelled)	Periodic (Gravelled)
D091	87	58	242	-	-
D092	22	14	180	-	-
D093	77	51	-	-	-
D094	130	87	1,084	-	-
D095	122	81	-	-	-
D096	81	54	677	-	-
D097	130	87	1,086	-	-
D099	25	17	211	-	-
D100	47	32	283	-	-
D101	36	24	303	-	-
D102	108	72	651	-	-
D103	137	91	973	-	-

ii. Improvement

Improvement refers to actions required to improve a road to bring it to a maintainable all-weather standard. It includes the following actions:

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 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 50 passenger car units (PCU) to reduce damage to the road surface.

6. **Widening** - Increase of the road width in roads with traffic volumes exceeding 500 passenger car units (PCU) to ensure the proper flow of traffic.

Table 23: Roads requiring cross drainage structures

Road Code	Road Name	Proposed Cross Drainage Structures			
		Bridge	Culvert	Causeway	Total
A001	Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak	3	1	3	7
A003	Kapilakot Madhubani Rampur bajar hudai Netrakali Kusheshwor Dumja Sadak	1	2	1	4
A004	Bandipur gope ramvede jugepani sadak	2	3	-	5
A006	Rosi gaapaa Pakhurefedi thakurthan archale ratu rancha hudai mahabharat gaapaa sadak	3	6	-	9
A007	Archale Kanflongdong Hattiaahal dekhi rancha motor bato	-	3	-	3
B001	Khattar amale hudai Faparchuli sadak	1	-	-	1
B003	Chandanpur dekhi satdobato main sadak	1	-	-	1
B007	Matokhani kudule besitol rampur bajar Marin Gaapaa hudai lalbandi motor bato	2	-	-	2
B011	Dothe Rancha sadak	-	1	-	1
B012	Singpal Paharilekh Jugepani sadak	-	3	-	3
C001	Amale Dalludada patamas bukti hudai tallo khattar samma sadak	-	1	-	1
C002	Mudedhara Bachheutar hudai madanbas sadak	-	4	-	4
C004	Swara aahaldada hudai ookhle samma sadak	-	-	1	1
C005	Bhaise dekhi godre hudai bastipur jane bato	-	1	-	1
C006	Tamajor gothdada bhanjyang sadak	-	-	-	-
C007	Gope mabi dekhi pakhure fedi garke sadak	1	1	-	2
C008	Narkate tallo aahale hudai mathillo aahale Sadak	1	-	-	1
D002	Jyamire simle sadak	-	1	-	1

Road Code	Road Name	Proposed Cross Drainage Structures			
		Bridge	Culvert	Causeway	Total
D006	Amale bhanjyang vwose dada sadak	-	1	-	1
D008	Thalagau koltar hudai patamas sadak	1	2	-	3
D010	Koltar bachheutar sadak	-	2	-	2
D011	Thalagau langdi bachheutar sadak	-	3	-	3
D012	Sunuwar tol langdi sadak	-	1	-	1
D013	Sunuwar tol langdi terso sadak	-	1	-	1
D016	Amale woda karyalaye hudai biribas jane sadak	-	1	-	1
D020	Mathillo khattar sukachuri dote hudai charchare mudedhara sadak	-	2	-	2
D021	Dhondurdada biribas sadak	-	2	-	2
D022	Sukachuri tunibhanjyang sadak	-	3	-	3
D032	Hayutar hirding sadak	1	-	-	1
D035	Chandanpur Khola gau sadak	1	-	-	1
D042	Lapse magardada hudai majhuwatham jane sadak	-	3	-	3
D050	Solabhanjyang dodh hudai sirise Ghising dada jane sadak	-	2	-	2
D054	Tamajor Bhadaure kholsi dekhi keuraghari hudai pachghare dhunge samma sadak	1	-	-	1
D056	Tamajor sirantol dekhi pachghare fedi sadak	1	-	-	1
D075	Jure aadhamara sadak	-	1	-	1
D079	Majhuwa thumka dekhi barabhise sadak	-	1	-	1
D080	Lakhank teenghare majhuwa sadak	-	1	-	1
D081	Dothe dekhi puchhartol hudai pakhuri jodne sadak	-	1	-	1
D084	Charghare motor bato	-	1	-	1

Road Code	Road Name	Proposed Cross Drainage Structures			
		Bridge	Culvert	Causeway	Total
D085	Ghatteswara paktungdada hudai dothe motor bato	-	2	-	2
D088	Khanikhola kharibot dothe motor bato	-	1	-	1
D089	Rampur khanikhola gyandada chainpur motor bato	-	2	-	2
D092	Kolbote dakshinkali motor bato	-	1	-	1
D093	Pipalbhyanjang dakshinkali motor bato	-	2	-	2
D094	Ratudovan hudai budumchuli motor bato	-	2	-	2
Grand Total		**20**	**65**	**5**	**90**

Table 24: Detail cost and quantity for improvement of Rural Municipal Roads

Road Code	Existing Road Surface (Km)					Class	Existing Width	Right of Way	Pavement Width (m)	Gravelling Width (m)	Retaining Structures (Cu.M)		Cross Drainage Structures			Side Drain (Km)	Gravelling Cost, (in Thousands)	Blacktopping Cost, (in Thousands)	Track Opening Cost, (in Thousands)	Total Cost of Construction (Including all required structures), (in Thousands)
	Concrete	Gravelled	Earthen	New Track	Total						Masonary Structures	Gabion Structures	Bridge	Culvert	Causeway					
A001	-	19.83	5.07	-	24.90	A	6.25	20.00	14.00	15.00	7,469.81	7,469.81	3	1	3	37.35	47,830	567,705	-	1,004,085
A002	-	-	3.82	-	3.82	A	4.00	14.00	11.00	12.00	1,144.58	1,144.58	-	-	-	5.72	28,778	68,348	-	117,156
A003	-	-	26.37	-	26.37	A	4.00	20.00	14.00	15.00	7,911.26	7,911.26	1	2	1	39.56	248,639	601,255	-	1,081,142
A004	-	-	8.20	0.90	9.10	A	6.00	14.00	11.00	12.00	2,729.58	2,729.58	2	3	-	13.65	68,630	162,995	12,313	435,448
A005	-	-	5.40	-	5.40	A	4.00	14.00	11.00	12.00	1,621.00	1,621.00	-	-	-	8.10	40,757	96,797	-	165,921
A006	-	-	13.62	3.53	17.15	A	4.00	14.00	11.00	12.00	5,144.03	5,144.03	3	6	-	25.72	129,336	307,172	48,431	795,588
A007	-	-	0.67	2.46	3.13	A	4.00	14.00	11.00	12.00	939.03	939.03	-	3	-	4.70	23,610	56,074	33,702	139,847
B001	0.05	-	16.38	-	16.43	A	5.00	10.00	7.00	8.00	4,930.45	4,930.45	1	-	-	24.65	82,386	186,774	-	401,729
B002	-	-	2.36	4.05	6.41	A	3.50	10.00	7.00	8.00	1,923.79	1,923.79	-	-	-	9.62	32,246	73,104	37,037	176,053
B003	-	-	12.19	-	12.19	A	4.00	10.00	7.00	8.00	3,656.91	3,656.91	1	-	-	18.28	61,297	138,963	-	310,541
B004	-	-	12.52	0.54	13.06	B	6.00	10.00	7.00	8.00	3,916.73	3,916.73	-	-	-	19.58	65,652	148,836	4,906	287,936
B005	-	-	4.78	1.35	6.14	B	5.00	10.00	7.00	8.00	1,840.50	1,840.50	-	-	-	9.20	30,850	69,939	12,355	145,353
B006	-	-	1.30	3.36	4.66	B	4.00	10.00	7.00	8.00	1,399.25	1,399.25	-	-	-	7.00	23,454	53,171	30,743	131,855
B007	-	-	0.55	1.95	2.50	B	5.00	10.00	7.00	8.00	749.93	749.93	2	-	-	3.75	12,570	28,497	17,838	164,601
B008	-	-	-	2.45	2.45	B	-	10.00	7.00	8.00	736.20	736.20	-	-	-	3.68	12,340	27,976	22,437	75,636
B009	-	-	10.26	-	10.26	B	4.00	10.00	7.00	8.00	3,078.50	3,078.50	-	-	-	15.39	51,602	116,983	-	222,458
B010	-	-	18.10	-	18.10	B	5.00	10.00	7.00	8.00	5,430.63	5,430.63	-	-	-	27.15	91,028	206,364	-	392,427
B011	-	-	-	0.95	0.95	C	-	10.00	7.00	8.00	286.36	286.36	-	1	-	1.43	4,800	10,882	8,727	31,734
B012	-	-	-	3.77	3.77	C	-	10.00	7.00	8.00	1,129.70	1,129.70	-	3	-	5.65	18,936	42,929	34,429	123,006
C001	-	-	7.76	-	7.76	C	4.00	8.00	5.50	6.50	2,329.30	2,329.30	-	1	-	11.65	31,723	69,546	-	143,960

Road Code	Existing Road Surface (Km)					Class	Existing Width	Right of Way	Pavement Width (m)	Gravelling Width (m)	Retaining Structures (Cu.M)		Cross Drainage Structures			Side Drain (Km)	Gravelling Cost, (in Thousands)	Blacktopping Cost, (in Thousands)	Track Opening Cost, (in Thousands)	Total Cost of Construction (Including all required structures), (in Thousands)
	Concrete	Gravelled	Earthen	New Track	Total						Masonary Structures	Gabion Structures	Bridge	Culvert	Causeway					
C002	-	-	7.02	-	7.02	C	4.00	8.00	5.50	6.50	2,105.20	2,105.20	-	4	-	10.53	28,671	62,855	-	136,081
C003	-	-	2.63	-	2.63	C	3.50	8.00	5.50	6.50	790.05	790.05	-	-	-	3.95	10,760	23,589	-	48,174
C004	-	-	1.46	2.07	3.53	C	3.50	8.00	5.50	6.50	1,057.84	1,057.84	-	-	1	5.29	14,407	31,584	15,371	80,946
C005	-	-	3.75	-	3.75	C	3.50	8.00	5.50	6.50	1,125.62	1,125.62	-	1	-	5.63	15,330	33,608	-	70,564
C006	-	-	6.48	-	6.48	C	4.00	8.00	5.50	6.50	1,944.76	1,944.76	-	-	-	9.72	26,486	58,065	-	118,584
C007	-	-	5.54	-	5.54	C	4.00	8.00	5.50	6.50	1,663.41	1,663.41	1	1	-	8.32	22,654	49,665	-	141,929
C008	-	-	2.09	1.24	3.33	C	4.00	8.00	5.50	6.50	999.87	999.87	1	-	-	5.00	13,617	29,853	9,225	108,764
C009	-	-	2.27	-	2.27	C	6.00	8.00	5.50	6.50	679.70	679.70	-	-	-	3.40	9,257	20,294	-	41,445
C010	-	-	1.07	0.60	1.67	C	4.00	8.00	5.50	6.50	500.35	500.35	-	-	-	2.50	6,814	14,939	4,452	34,962
C011	-	-	1.56	0.61	2.17	C	6.00	8.00	5.50	6.50	650.83	650.83	-	-	-	3.25	8,864	19,432	4,536	44,222
C012	-	-	1.86	-	1.86	C	5.00	8.00	5.50	6.50	557.29	557.29	-	-	-	2.79	7,590	16,639	-	33,981
C013	-	-	5.73	-	5.73	C	4.00	8.00	5.50	6.50	1,718.40	1,718.40	-	-	-	8.59	23,403	51,306	-	104,781
C014	-	-	3.06	-	3.06	C	4.00	8.00	5.50	6.50	919.40	919.40	-	-	-	4.60	12,521	27,451	-	56,062
D001	-	-	-	4.54	4.54	C	-	6.00	3.75	4.75	1,362.39	1,362.39	-	-	-	6.81	13,559	27,734	24,653	89,788
D002	-	-	1.16	0.59	1.75	C	2.50	6.00	3.75	4.75	524.37	524.37	-	1	-	2.62	5,219	10,675	3,217	29,766
D003	-	-	0.80	-	0.80	C	3.00	6.00	3.75	4.75	239.35	239.35	-	-	-	1.20	2,382	4,873	-	11,443
D004	-	-	0.21	1.84	2.05	C	3.00	6.00	3.75	4.75	615.09	615.09	-	-	-	3.08	6,122	12,522	9,978	39,385
D005	-	-	3.73	-	3.73	C	4.00	6.00	3.75	4.75	1,118.91	1,118.91	-	-	-	5.59	11,136	22,778	-	53,495
D006	-	-	-	1.10	1.10	C	-	6.00	3.75	4.75	330.63	330.63	-	1	-	1.65	3,291	6,731	5,983	23,269
D007	-	-	-	1.04	1.04	C	-	6.00	3.75	4.75	311.21	311.21	-	-	-	1.56	3,097	6,335	5,631	20,510
D008	-	-	1.85	1.25	3.09	C	3.00	6.00	3.75	4.75	928.15	928.15	1	2	-	4.64	9,237	18,895	6,767	83,670

Road Code	Existing Road Surface (Km)					Class	Existing Width	Right of Way	Pavement Width (m)	Gravelling Width (m)	Retaining Structures (Cu.M)		Cross Drainage Structures			Side Drain (Km)	Gravelling Cost, (in Thousands)	Blacktopping Cost, (in Thousands)	Track Opening Cost, (in Thousands)	Total Cost of Construction (Including all required structures), (in Thousands)
	Concrete	Gravelled	Earthen	New Track	Total						Masonary Structures	Gabion Structures	Bridge	Culvert	Causeway					
D009	-	-	-	0.74	0.74	C	-	6.00	3.75	4.75	221.15	221.15	-	-	-	1.11	2,201	4,502	4,002	14,575
D010	-	-	-	2.63	2.63	C	-	6.00	3.75	4.75	788.58	788.58	-	2	-	3.94	7,848	16,053	14,270	54,928
D011	-	-	3.73	-	3.73	C	3.00	6.00	3.75	4.75	1,117.66	1,117.66	-	3	-	5.59	11,123	22,752	-	57,871
D012	-	-	-	0.27	0.27	C	-	6.00	3.75	4.75	79.80	79.80	-	1	-	0.40	794	1,624	1,444	6,738
D013	-	-	-	0.95	0.95	C	-	6.00	3.75	4.75	285.57	285.57	-	1	-	1.43	2,842	5,813	5,167	20,299
D014	-	-	0.87	-	0.87	C	4.00	6.00	3.75	4.75	259.63	259.63	-	-	-	1.30	2,584	5,285	-	12,413
D015	-	-	0.17	-	0.17	C	3.00	6.00	3.75	4.75	50.49	50.49	-	-	-	0.25	502	1,028	-	2,414
D016	-	-	0.13	1.96	2.09	C	3.00	6.00	3.75	4.75	626.88	626.88	-	1	-	3.13	6,239	12,761	10,636	42,085
D017	-	-	-	0.54	0.54	C	-	6.00	3.75	4.75	161.36	161.36	-	-	-	0.81	1,606	3,285	2,920	10,635
D018	-	-	-	1.98	1.98	C	-	6.00	3.75	4.75	594.72	594.72	-	-	-	2.97	5,919	12,107	10,762	39,195
D019	-	-	-	0.44	0.44	C	-	6.00	3.75	4.75	132.28	132.28	-	-	-	0.66	1,317	2,693	2,394	8,718
D020	-	-	8.27	3.86	12.13	C	4.00	6.00	3.75	4.75	3,640.31	3,640.31	-	2	-	18.20	36,230	74,106	20,971	197,970
D021	-	-	2.74	-	2.74	C	3.00	6.00	3.75	4.75	820.98	820.98	-	2	-	4.10	8,171	16,713	-	42,208
D022	-	-	-	1.83	1.83	C	-	6.00	3.75	4.75	549.45	549.45	-	3	-	2.75	5,468	11,185	9,942	40,647
D023	-	-	-	1.21	1.21	D	-	6.00	3.75	4.75	362.85	362.85	-	-	-	1.81	3,611	7,387	6,566	23,914
D024	-	-	-	1.82	1.82	D	-	6.00	3.75	4.75	546.05	546.05	-	-	-	2.73	5,434	11,116	9,881	35,987
D025	-	-	-	1.60	1.60	D	-	6.00	3.75	4.75	480.85	480.85	-	-	-	2.40	4,786	9,789	8,701	31,690
D026	-	-	-	2.71	2.71	D	-	6.00	3.75	4.75	813.59	813.59	-	-	-	4.07	8,097	16,562	14,722	53,620
D027	-	-	-	1.29	1.29	D	-	6.00	3.75	4.75	385.92	385.92	-	-	-	1.93	3,841	7,856	6,983	25,434
D028	-	-	1.00	-	1.00	D	3.50	6.00	3.75	4.75	299.65	299.65	-	-	-	1.50	2,982	6,100	-	14,326
D029	-	-	3.46	-	3.46	D	4.00	6.00	3.75	4.75	1,036.71	1,036.71	-	-	-	5.18	10,318	21,104	-	49,565

Road Code	Existing Road Surface (Km)					Class	Existing Width	Right of Way	Pavement Width (m)	Gravelling Width (m)	Retaining Structures (Cu.M)		Cross Drainage Structures			Side Drain (Km)	Gravelling Cost, (in Thousands)	Blacktopping Cost, (in Thousands)	Track Opening Cost, (in Thousands)	Total Cost of Construction (Including all required structures), (in Thousands)
	Concrete	Gravelled	Earthen	New Track	Total						Masonary Structures	Gabion Structures	Bridge	Culvert	Causeway					
D030	0.03	-	0.44	-	0.48	D	3.50	6.00	3.75	4.75	143.22	143.22	-	-	-	0.72	1,321	2,702	-	6,529
D031	-	-	0.17	-	0.17	D	3.50	6.00	3.75	4.75	49.55	49.55	-	-	-	0.25	493	1,009	-	2,369
D032	-	-	1.63	-	1.63	D	3.50	6.00	3.75	4.75	488.11	488.11	1	-	-	2.44	4,858	9,936	-	52,908
D033	-	-	0.19	-	0.19	D	3.00	6.00	3.75	4.75	56.74	56.74	-	-	-	0.28	565	1,155	-	2,713
D034	-	-	2.89	-	2.89	D	3.50	6.00	3.75	4.75	867.19	867.19	-	-	-	4.34	8,631	17,654	-	41,460
D035	-	-	4.70	-	4.70	D	3.50	6.00	3.75	4.75	1,409.73	1,409.73	1	-	-	7.05	14,030	28,698	-	96,970
D036	-	-	1.62	-	1.62	D	3.50	6.00	3.75	4.75	486.52	486.52	-	-	-	2.43	4,842	9,904	-	23,260
D037	-	-	1.56	-	1.56	D	3.50	6.00	3.75	4.75	468.97	468.97	-	-	-	2.34	4,667	9,547	-	22,421
D038	-	-	1.46	-	1.46	D	3.50	6.00	3.75	4.75	437.85	437.85	-	-	-	2.19	4,358	8,913	-	20,933
D039	-	-	1.20	0.52	1.72	D	3.50	6.00	3.75	4.75	516.50	516.50	-	-	-	2.58	5,140	10,514	2,816	27,509
D040	-	-	1.52	-	1.52	D	3.50	6.00	3.75	4.75	456.22	456.22	-	-	-	2.28	4,540	9,287	-	21,811
D041	-	-	-	1.79	1.79	D	-	6.00	3.75	4.75	536.79	536.79	-	-	-	2.68	5,342	10,928	9,713	35,377
D042	-	-	3.22	0.71	3.94	D	4.00	6.00	3.75	4.75	1,181.45	1,181.45	-	3	-	5.91	11,758	24,051	3,874	64,794
D043	-	-	2.77	0.78	3.55	D	4.00	6.00	3.75	4.75	1,063.84	1,063.84	-	-	-	5.32	10,588	21,657	4,231	55,093
D044	-	-	0.46	-	0.46	D	4.00	6.00	3.75	4.75	136.54	136.54	-	-	-	0.68	1,359	2,780	-	6,528
D045	-	-	1.25	1.02	2.27	D	4.00	6.00	3.75	4.75	681.55	681.55	-	-	-	3.41	6,783	13,874	5,563	38,148
D046	-	-	0.84	0.33	1.17	D	4.00	6.00	3.75	4.75	351.23	351.23	-	-	-	1.76	3,496	7,150	1,818	18,611
D047	-	-	0.07	-	0.07	D	3.50	6.00	3.75	4.75	19.61	19.61	-	-	-	0.10	195	399	-	938
D048	-	-	0.07	-	0.07	D	3.50	6.00	3.75	4.75	20.57	20.57	-	-	-	0.10	205	419	-	983
D049	-	-	0.21	-	0.21	D	3.50	6.00	3.75	4.75	63.83	63.83	-	-	-	0.32	635	1,299	-	3,052
D050	-	-	2.66	0.54	3.19	D	4.00	6.00	3.75	4.75	957.91	957.91	-	2	-	4.79	9,534	19,500	2,916	51,671

Road Code	Existing Road Surface (Km)					Class	Existing Width	Right of Way	Pavement Width (m)	Gravelling Width (m)	Retaining Structures (Cu.M)		Cross Drainage Structures			Side Drain (Km)	Gravelling Cost, (in Thousands)	Blacktopping Cost, (in Thousands)	Track Opening Cost, (in Thousands)	Total Cost of Construction (Including all required structures), (in Thousands)
	Concrete	Gravelled	Earthen	New Track	Total						Masonary Structures	Gabion Structures	Bridge	Culvert	Causeway					
D051	-	-	-	1.09	1.09	D	-	6.00	3.75	4.75	328.20	328.20	-	-	-	1.64	3,266	6,681	5,939	21,630
D052	-	-	-	0.41	0.41	D	-	6.00	3.75	4.75	121.72	121.72	-	-	-	0.61	1,211	2,478	2,203	8,022
D053	-	-	-	0.82	0.82	D	-	6.00	3.75	4.75	244.88	244.88	-	-	-	1.22	2,437	4,985	4,431	16,139
D054	-	-	5.07	-	5.07	D	4.00	6.00	3.75	4.75	1,520.43	1,520.43	1	-	-	7.60	15,132	30,952	-	102,263
D055	-	-	-	0.40	0.40	D	-	6.00	3.75	4.75	120.96	120.96	-	-	-	0.60	1,204	2,462	2,189	7,972
D056	-	-	-	0.93	0.93	D	-	6.00	3.75	4.75	278.48	278.48	1	-	-	1.39	2,771	5,669	5,039	47,924
D057	-	-	-	2.25	2.25	D	-	6.00	3.75	4.75	675.87	675.87	-	-	-	3.38	6,727	13,759	12,230	44,543
D058	-	-	0.53	0.09	0.62	D	4.00	6.00	3.75	4.75	185.10	185.10	-	-	-	0.93	1,842	3,768	465	9,315
D059	-	-	3.34	-	3.34	D	4.00	6.00	3.75	4.75	1,000.63	1,000.63	-	-	-	5.00	9,959	20,370	-	47,839
D060	-	-	-	1.17	1.17	D	-	6.00	3.75	4.75	351.34	351.34	-	-	-	1.76	3,497	7,152	6,358	23,155
D061	-	-	0.64	-	0.64	D	4.00	6.00	3.75	4.75	192.28	192.28	-	-	-	0.96	1,914	3,914	-	9,193
D062	-	-	2.21	-	2.21	D	4.00	6.00	3.75	4.75	664.06	664.06	-	-	-	3.32	6,609	13,518	-	31,748
D063	-	-	-	1.77	1.77	D	-	6.00	3.75	4.75	529.74	529.74	-	-	-	2.65	5,272	10,784	9,586	34,912
D064	-	-	0.45	1.12	1.57	D	3.00	6.00	3.75	4.75	471.79	471.79	-	-	-	2.36	4,695	9,604	6,078	28,634
D065	-	-	0.51	0.73	1.24	D	4.00	6.00	3.75	4.75	370.77	370.77	-	-	-	1.85	3,690	7,548	3,956	21,683
D066	-	-	0.47	-	0.47	D	4.00	6.00	3.75	4.75	140.94	140.94	-	-	-	0.70	1,403	2,869	-	6,738
D067	-	-	0.92	0.26	1.18	D	4.00	6.00	3.75	4.75	352.99	352.99	-	-	-	1.76	3,513	7,186	1,416	18,292
D068	-	-	0.81	0.46	1.27	D	5.00	6.00	3.75	4.75	381.09	381.09	-	-	-	1.91	3,793	7,758	2,474	20,694
D069	-	-	-	0.53	0.53	D	-	6.00	3.75	4.75	158.45	158.45	-	-	-	0.79	1,577	3,226	2,867	10,442
D070	-	-	3.99	-	3.99	D	4.00	6.00	3.75	4.75	1,195.59	1,195.59	-	-	-	5.98	11,899	24,339	-	57,161
D071	-	-	-	0.31	0.31	D	-	6.00	3.75	4.75	94.24	94.24	-	-	-	0.47	938	1,918	1,705	6,211

Road Code	Existing Road Surface (Km)					Class	Existing Width	Right of Way	Pavement Width (m)	Gravelling Width (m)	Retaining Structures (Cu.M)		Cross Drainage Structures			Side Drain (Km)	Gravelling Cost, (in Thousands)	Blacktopping Cost, (in Thousands)	Track Opening Cost, (in Thousands)	Total Cost of Construction (Including all required structures), (in Thousands)
	Concrete	Gravelled	Earthen	New Track	Total						Masonary Structures	Gabion Structures	Bridge	Culvert	Causeway					
D072	-	-	0.31	-	0.31	D	4.00	6.00	3.75	4.75	92.02	92.02	-	-	-	0.46	916	1,873	-	4,399
D073	-	-	0.21	-	0.21	D	4.00	6.00	3.75	4.75	61.89	61.89	-	-	-	0.31	616	1,260	-	2,959
D074	-	-	-	2.53	2.53	D	-	6.00	3.75	4.75	758.71	758.71	-	-	-	3.79	7,551	15,445	13,729	50,003
D075	-	-	-	2.34	2.34	D	-	6.00	3.75	4.75	701.07	701.07	-	1	-	3.51	6,977	14,272	12,686	47,683
D076	-	-	1.66	1.55	3.22	D	5.00	6.00	3.75	4.75	964.94	964.94	-	-	-	4.82	9,603	19,643	8,433	54,566
D077	-	-	0.87	-	0.87	D	3.00	6.00	3.75	4.75	260.95	260.95	-	-	-	1.30	2,597	5,312	-	12,476
D078	-	-	2.15	-	2.15	D	4.00	6.00	3.75	4.75	645.07	645.07	-	-	-	3.23	6,420	13,132	-	30,841
D079	-	-	0.94	1.76	2.70	D	4.00	6.00	3.75	4.75	809.59	809.59	-	1	-	4.05	8,057	16,481	9,557	49,741
D080	-	-	1.49	2.06	3.55	D	4.00	6.00	3.75	4.75	1,065.98	1,065.98	-	1	-	5.33	10,609	21,700	11,183	63,626
D081	-	-	-	1.91	1.91	D	-	6.00	3.75	4.75	572.51	572.51	-	1	-	2.86	5,698	11,655	10,360	39,210
D082	-	-	-	2.90	2.90	D	-	6.00	3.75	4.75	869.55	869.55	-	-	-	4.35	8,654	17,702	15,735	57,308
D083	-	-	0.85	1.69	2.54	D	3.00	6.00	3.75	4.75	760.89	760.89	-	-	-	3.80	7,573	15,490	9,178	45,556
D084	-	-	0.63	-	0.63	D	4.00	6.00	3.75	4.75	188.77	188.77	-	1	-	0.94	1,879	3,843	-	10,504
D085	-	-	-	2.25	2.25	D	-	6.00	3.75	4.75	675.49	675.49	-	2	-	3.38	6,723	13,751	12,223	47,475
D086	-	-	3.04	-	3.04	D	4.00	6.00	3.75	4.75	910.96	910.96	-	-	-	4.55	9,066	18,545	-	43,552
D087	-	-	-	2.38	2.38	D	-	6.00	3.75	4.75	712.97	712.97	-	-	-	3.56	7,096	14,514	12,901	46,988
D088	-	-	1.58	-	1.58	D	4.00	6.00	3.75	4.75	473.72	473.72	-	1	-	2.37	4,715	9,644	-	24,127
D089	-	-	3.80	-	3.80	D	4.00	6.00	3.75	4.75	1,140.46	1,140.46	-	2	-	5.70	11,350	23,217	-	57,482
D090	-	-	0.74	-	0.74	D	4.00	6.00	3.75	4.75	221.21	221.21	-	-	-	1.11	2,202	4,503	-	10,576
D091	-	-	0.99	0.40	1.39	D	4.00	6.00	3.75	4.75	415.62	415.62	-	-	-	2.08	4,136	8,461	2,145	22,016
D092	-	-	1.06	-	1.06	D	4.00	6.00	3.75	4.75	317.75	317.75	-	1	-	1.59	3,162	6,468	-	16,670

Road Code	Existing Road Surface (Km)					Class	Existing Width	Right of Way	Pavement Width (m)	Gravelling Width (m)	Retaining Structures (Cu.M)		Cross Drainage Structures			Side Drain (Km)	Gravelling Cost, (in Thousands)	Blacktopping Cost, (in Thousands)	Track Opening Cost, (in Thousands)	Total Cost of Construction (Including all required structures), (in Thousands)
	Concrete	Gravelled	Earthen	New Track	Total						Masonary Structures	Gabion Structures	Bridge	Culvert	Causeway					
D093	-	-	2.28	0.88	3.15	D	4.00	6.00	3.75	4.75	946.38	946.38	-	2	-	4.73	9,419	19,265	4,752	52,955
D094	-	-	3.40	0.58	3.99	D	4.00	6.00	3.75	4.75	1,196.74	1,196.74	-	2	-	5.98	11,910	24,362	3,171	63,344
D095	-	-	-	4.47	4.47	D	-	6.00	3.75	4.75	1,342.17	1,342.17	-	-	-	6.71	13,358	27,323	24,287	88,455
D096	-	-	0.81	-	0.81	D	5.00	6.00	3.75	4.75	243.87	243.87	-	-	-	1.22	2,427	4,965	-	11,660
D097	-	-	-	4.09	4.09	D	-	6.00	3.75	4.75	1,226.03	1,226.03	-	-	-	6.13	12,202	24,958	22,185	80,801
D098	-	-	-	1.01	1.01	D	-	6.00	3.75	4.75	304.20	304.20	-	-	-	1.52	3,027	6,193	5,504	20,048
D099	-	-	-	3.38	3.38	D	-	6.00	3.75	4.75	1,013.35	1,013.35	-	-	-	5.07	10,085	20,629	18,337	66,784
D100	-	-	-	2.41	2.41	D	-	6.00	3.75	4.75	722.19	722.19	-	-	-	3.61	7,188	14,702	13,068	47,596
D101	-	-	-	1.33	1.33	D	-	6.00	3.75	4.75	398.95	398.95	-	-	-	1.99	3,970	8,121	7,219	26,293
D102	-	-	-	0.87	0.87	D	-	6.00	3.75	4.75	261.72	261.72	-	-	-	1.31	2,605	5,328	4,736	17,248
D103	-	-	-	0.76	0.76	D	-	6.00	3.75	4.75	228.00	228.00	-	-	-	1.14	2,269	4,641	4,126	15,026

4.6 Short Term (Five Year) Projected Financial Plan

To fulfil the required interventions implementation plan, financial requirements should be collected from the possible funding sources. For this, the present financial capacity of the Rural Municipality is considered to increase by 10% each year. The Rural Municipality aims to invest approximately 10 Crore of budget through Rural Municipality in road infrastructure in the following fiscal year and this budget will increase on the years following.

4.6.1 Sharing of Funds

The distribution of the available road sector budget for the RMTMP period is given by ToR is as given below figure. Out of 100% budget, 70% is allocated for the construction of roads and 30% is allocated for maintenance work. As this amount of budget for maintenance work is huge, this amount can also be used for the construction of drain and retaining structures while in the initial RMTMP period. After large network of road is developed, this amount will be used in maintenance work.

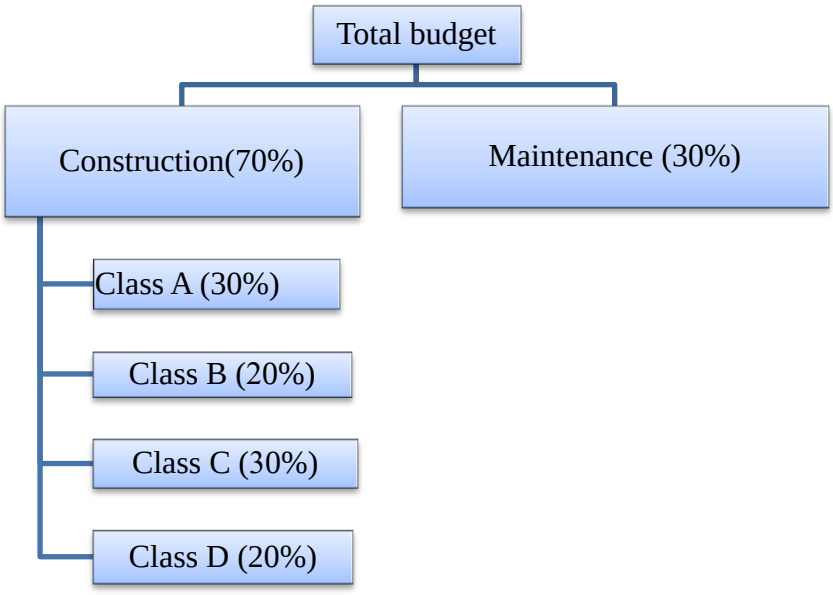


Figure 21: Distribution of Budget in RMTMP period

Based on the above distribution scheme of budget, the required annual budget will be as follows:

Table 25: First Five Year Projected Budget distribution

Year	Projected Budget (in Thousand)		
	Construction	Maintenance	Total
1	190,310	81,561	271,871
2	209,344	89,719	299,063
3	230,276	98,690	328,966
4	253,304	108,559	361,863
5	278,636	119,415	398,051
Total	**1,161,870**	**497,944**	**1,659,814**

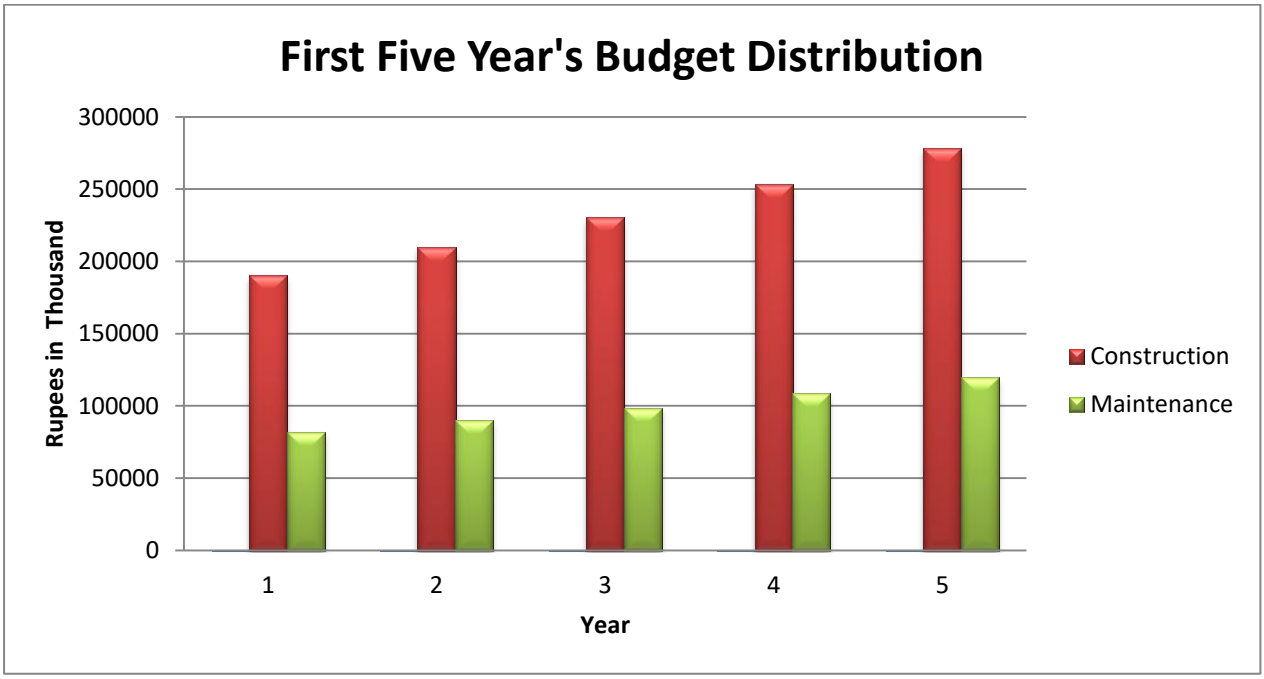


Figure 22: Projected Budget distribution for RMTMP period

Similarly, the projected construction budget for different classes of roads is as follow:

Table 26: First Five Year Projected construction Budget for different class of roads

Year	Projected Budget (in Thousand)					
	Class A	Class B	Class C	Class D	Maintenance	Total
1	57,093	38,062	57,093	38,062	81,561	271,871
2	62,803	41,869	62,803	41,869	89,719	299,063
3	69,083	46,055	69,083	46,055	98,690	328,966
4	75,991	50,661	75,991	50,661	108,559	361,863
5	83,591	55,727	83,591	55,727	119,415	398,051
Total	**348,561**	**232,374**	**348,561**	**232,374**	**497,944**	**1,659,814**

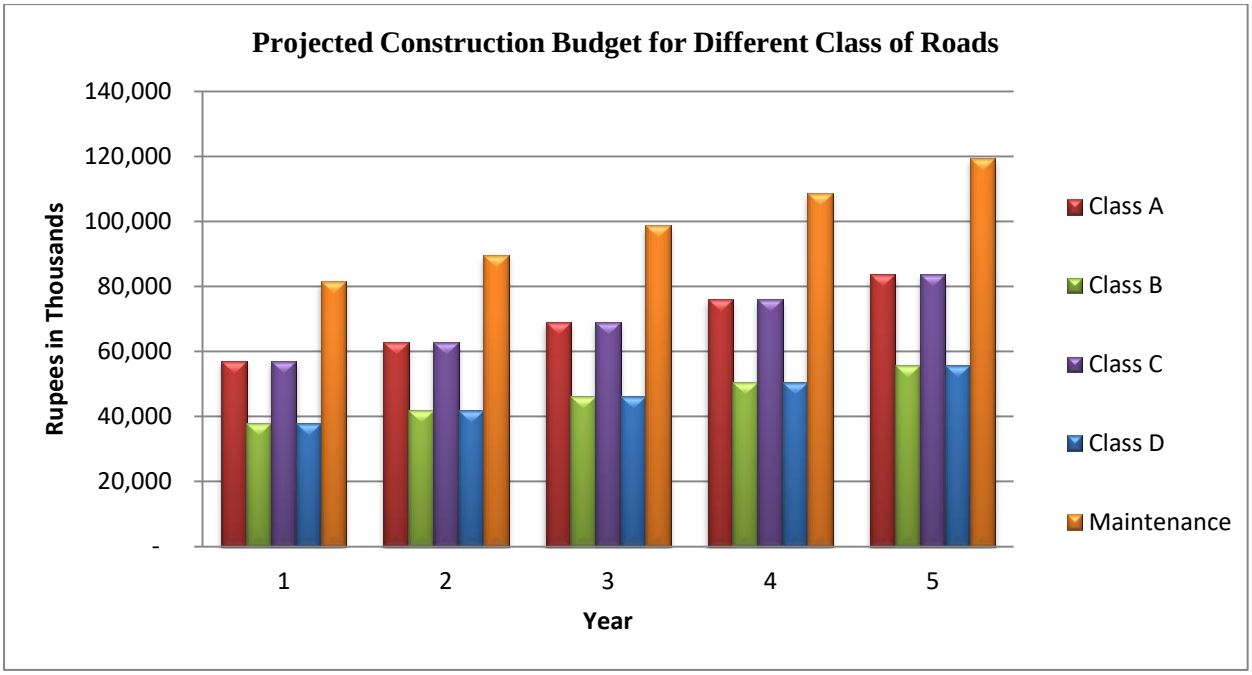


Figure 23: Projected Construction Budget for RMTMP period

4.6.2 First Five-Year Rural Municipality Transport Implementation Plan

For the implementation plan of RMTMP period, the following assumptions have been made:

- All class of roads are planned for upto all weather condition only
- Emphasis given to accessibility.
- Maintenance budget is considered to use in the construction/management of drain and retaining structures.

The investment plan for first five-year plan is as follows:

Table 27: First Five Year Investment Plan for Construction and maintenance of roads

Year	Capacity of Rural Municipality (in Thousands)		
	Construction	Maintenance	Total
1	70,000	30,000	100,000
2	77,000	33,000	110,000
3	84,700	36,300	121,000
4	93,170	39,930	133,100
5	102,486	43,923	146,409
Total	**427,356**	**183,153**	**610,509**

Table 28: First Five Year Investment Plan for different class of roads

Year	Capacity of Rural Municipality (in Thousands)					Sub Total
	Class A	Class B	Class C	Class D	Maintenance	
1	21,000	14,000	21,000	14,000	30,000	100,000
2	23,100	15,400	23,100	15,400	33,000	110,000
3	25,410	16,940	25,410	16,940	36,300	121,000
4	27,951	18,634	27,951	18,634	39,930	133,100
5	30,746	20,497	30,746	20,497	43,923	146,409
Total	**128,207**	**85,471**	**128,207**	**85,471**	**183,153**	**610,509**

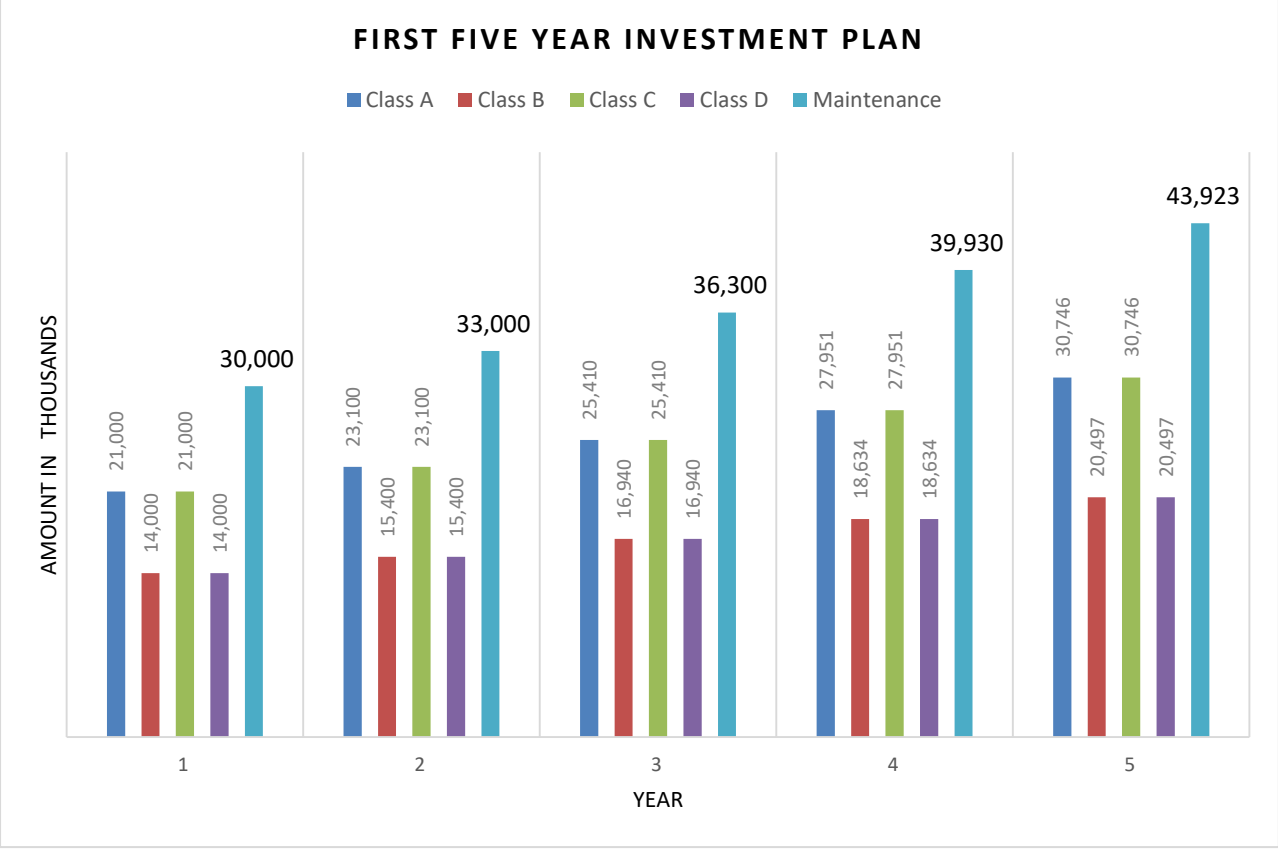


Figure 24: First Five Year Investment plan for RMTMP period

Chapter 6: Implementation and Monitoring of RMTMP

The RMTMP provides both long-term direction for the future development of the Rural Municipality's transportation system and a plan for immediate action, including several recommendations the Rural Municipality can implement through its regular activities. Successful implementation will ultimately require that concurrent efforts be undertaken to achieve the key strategies set out by Rural Municipality.

Inevitably forecasts and other assumptions made in preparing the RMTMP will prove imprecise or directions will change over time. As such, this RMTMP should be considered a starting point for transportation planning and monitoring. The plan should be updated regularly, at a minimum every 5 years.

The following sections provide guidance on implementing and monitoring this RMTMP.

6.1 Use of RMTMP

The RMTMP is the overarching strategic document that provides a framework for how the Rural Municipality will address its transportation needs to the year 2039. It describes, anticipates and plans for the movement of people and goods in a multi-modal, accessible transportation system. The RMTMP is not a provincially legislated document, and therefore has no statutory authority. That authority is provided through the Rural Municipality's Official Plan by incorporating the main policy directions of the RMTMP. The primary purpose of the RMTMP is to guide the Rural Municipality's transportation-related decision making and provide direction for its discussions and negotiations with other agencies and governments. It also provides the need and justification for transportation infrastructure projects that require approval from Rural Municipality, thereby satisfying long term plan of Rural Municipality of that process with problem or opportunity identification and evaluation of alternative solutions. In addition, the RMTMP is not just a plan of infrastructure actions. It provides the policy framework on which to make operational decisions for the Rural Municipality.

6.2 Community Outreach

Public involvement was an integral component of the plan development process and will be a key to successful implementation of the RMTMP and future updates of the plan. As a result of the extensive community engagement process, many individuals have identified an interest in being kept informed of the progress of the RMTMP and should be notified when the plan is complete

and available for viewing. The web site of Rural Municipality and other information systems inside Rural Municipality should continue to be the focal point for the dissemination of information regarding the RMTMP and implementation progress.

6.3 Integration with Official Plan and Programs of Rural Municipality

The policy and network recommendations of the RMTMP should be incorporated into the yearly plan and programs of Rural Municipality to provide the foundation and basis for implementation. The Rural Municipality should determine how and when to incorporate these recommendations into the yearly budget of Rural Municipality. Development of the RMTMP has had regard for on-going planning initiatives of other agencies. However, since several of those initiatives are still incomplete, it is conceivable that the Rural Municipality may be required to implement certain transportation aspects of the studies in its yearly plan

6.4 Monitoring the Plan

The RMTMP is not intended to be a static document. Rather it must be flexible and adapt to changes in travel characteristics, user behaviour, development trends, growth patterns and other unforeseen events over time. There are also several initiatives planned or underway by other agencies that may also have an effect on the recommendations of the RMTMP as they unfold. It is important to gather pertinent information about the Rural Municipal transportation system and factors affecting its use and development on a regular basis. A clear understanding of changing conditions and progress enables more informed implementation decisions and priority setting. It also assists in assessing how well the Rural Municipality is progressing towards its Transportation Vision and supports reviews of the RMTMP itself. Regular monitoring allows progress to be tracked and performance to be measured and reported. The program would feature monitoring to assess changes in transportation system performance over time.

6.5 Plan Review and Update

Regular reviews and updates of the RMTMP allow for the on-going assessment of its effectiveness and relevance. Establishing this stable transportation planning cycle ensures the plan strategies remain flexible to respond to unforeseen developments and imprecise assumptions. The performance of the plan in achieving the Transportation Vision can also be

reviewed, and necessary adjustments in strategy made. As well, the consultant recommends that master plans be reviewed every five years to determine the need for a detailed formal review and/or updating.

The review process provides a timely opportunity to revisit the assumptions of the RMTMP and consider the need for an update. The monitoring program discussed in above will also provide an indication of the need for a review.

All future RMTMP updates should include a comprehensive and proactive public outreach program. This program should include Public Information Centres, stakeholder workshops and other innovative outreach strategies that solicit input from all residents within the Rural Municipality, including youth and the transportation disadvantaged.

Over the time period preceding the formal review, Rural Municipal body's decisions on transportation issues will have the inevitable effect of amending, deleting, replacing or complementing some of the policies in the RMTMP. For this reason, individuals must consider this plan in conjunction with the record of subsequent Rural Municipal decisions to obtain a complete understanding of current policy and plans. The Rural Municipality may amend the RMTMP in the intervening period to incorporate substantive changes or major initiatives, but on-going updates are not contemplated.

Chapter 7: CONCLUSION

The report of RMTMP of Ghyanglekh Rural Municipality is prepared after the analysis of field data and requirement of the Rural Municipality itself. This RMTMP planning is based on the assumption that the spending capacity of Municipality increases by 10% per year. The total budget for 20 years of implementation of this RMTMP is projected to be **1564.26 Crore** Nepalese rupees. Among that total budget, for road construction and maintenance the total budget required is **1557.16 Crore** Nepalese rupees, 70% of which is allocated for construction and 30% is allocated for maintenance of existing structures. The ultimate goal of this RMTMP is to blacktop all the Municipality roads to their full extent.

The overall road network along with location points are shown in a interactive online map with satellite basemap. The details of the roads and locations can be obtained from the interactive map through the following link::

https://www.arcgis.com/apps/View/index.html?appid=4c2b73dec27d4cb9823e3655a8c2d8d8

For convenience, the above link has been shortened as::

https://www.tinyurl.com/Ghanglekhroads

(Using any of the above links redirects to the same map.)

The concept of RMTMP is to develop sustainable and economic road network; therefore, the Rural Municipality should focus on strengthening existing road network to operate them in all weather conditions rather than opening new tracks. Moreover, strategically important tracks should be opened after proper planning and design. Due to unavailability of intra municipal transport system, the number of private vehicles is increasing in the Rural Municipality which may cause severe problem of traffic congestion in future. So, Municipality should take immediate action to operate local transport system inside the Rural Municipality by Rural Municipality itself or with collaboration with private entities. Similarly, the Rural Municipality should allocate different land use zones based on their current and future use, which will be applicable in future planning of infrastructure facilities inside Rural Municipaliy.

References

Australia, M. R. (2011). *Road Hierarchy Criteria.*

Central Bureau of Statistics. (2013). *National Census 2011*. Kathmandu: Government of Nepal, National Planning Commission Secretariat.

Cole, S. (2005). *Applied Transport Economics Policy, Management and Decision Making.* London: Kogan Page Limited.

Elgar, E. (2002). *Transport Economics.* Cheltenham: Edward ELgar Publishing Limited.

Eppell, V. A., Bunker, J., & McClurg, B. (2001). A four level road hierarchy for network planning and management. *Proceedings 20th ARRB Conference.* Melbourne: Jaeger, Vicki, Eds.

kadiyali, D. L. (2011). *Traffic Engineering and Transport planning.*

Litman, T. (2015). *Evaluating Active Transport Benefits and Costs (Guide to valuing walking and cycling improvements and encouragement programs).* Victooria Transport Policy Institute.

McClurg, B., Bunker , J., & Eppell, V. (2001). A four level road hierarchy for network planning and management. *ARRB.* Melbourne.

Meyer M.D & Miller E.J. *Urban Transportation Planning.*

National Planning Commission. (2012). *National population and housing census (A national report).* Kathmandu: Central Bureau of Statistics.

Government of Nepal, (2068). *Nepal Urban Road Standard 2068 (Draft).*

Department of Roads, *Nepal Road Standard 2070.*

TRB. (2013). *Transit capacity and quality of service manual.* Washington D.C.: Transit cooperative research program.

National Urban Development Strategy 2015, GoN, Ministry of Urban Development

Town of Halton Hills, Transportation Master Plan (2011)

District Transport Master Plan Sindhuli

Nepal Road Safety Action Plan 2011-2020, GoN, Ministry of Physical Planning and Transport Management

National Cycle Manual, National Transport Authority, Ireland

The Himalayan Times publication, 25 August, 2016 and 01 November, 2017

Editorial, 24 December, 2018, The Himalayan Times

The Kathmandu Post, 24 September, 2014

ANNEX –I Ward Wise Roads

WARD No. 01

S. N	Road Code	Road Name	Approx. Length (Km)				Total
			Concrete	Earthen	Gravelled	New Track	
1	A001	Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak	-	-	11.99	-	11.99
2	A002	Mudedhara madanbas krisi sadak	-	3.82	-	-	3.82
3	B001	Khattar amale hudai Faparchuli sadak	0.05	16.38	-	-	16.43
4	C001	Amale Dalludada patamas bukti hudai tallo khattar samma sadak	-	7.76	-	-	7.76
5	C002	Mudedhara Bachheutar hudai madanbas sadak	-	7.02	-	-	7.02
6	D001	Simle pari hudai dhanamana samma sadak	-	-	-	4.54	4.54
7	D002	Jyamire simle sadak	-	1.16	-	0.59	1.75
8	D003	Bukti nayagau sadak	-	0.80	-	-	0.80
9	D004	Acharya dada simle sadak	-	0.21	-	1.84	2.05
10	D005	Simle vwose hudai patmas sadak	-	3.73	-	-	3.73
11	D006	Amale bhanjyang vwose dada sadak	-	-	-	1.10	1.10
12	D007	Mahintar sadak	-	-	-	1.04	1.04
13	D008	Thalagau koltar hudai patamas sadak	-	1.85	-	1.25	3.09
14	D009	Koltar hudai walding school	-	-	-	0.74	0.74
15	D010	Koltar bachheutar sadak	-	-	-	2.63	2.63
16	D011	Thalagau langdi bachheutar sadak	-	3.73	-	-	3.73
17	D012	Sunuwar tol langdi sadak	-	-	-	0.27	0.27
18	D013	Sunuwar tol langdi terso sadak	-	-	-	0.95	0.95
19	D014	Ambote sadak	-	0.87	-	-	0.87
20	D015	Amale mabi jane bato	-	0.17	-	-	0.17
21	D016	Amale woda karyalaye hudai biribas jane sadak	-	0.13	-	1.96	2.09
22	D017	Jogitar hudai ghattekhola samma sadak	-	-	-	0.54	0.54

S. N	Road Code	Road Name	Approx. Length (Km)				Total
			Concrete	Earthen	Gravelled	New Track	
23	D018	Khattar bajhkhet hudai bajardada sadak	-	-	-	1.98	1.98
24	D019	Simle khattar hudai bajar dada sadak	-	-	-	0.44	0.44
25	D020	Mathillo khattar sukachuri dote hudai charchare mudedhara sadak	-	8.27	-	3.86	12.13
26	D021	Dhondurdada biribas sadak	-	2.74	-	-	2.74
27	D022	Sukachuri tunibhanjyang sadak	-	-	-	1.83	1.83
28	D023	Tunibhanjyang virgau sadak	-	-	-	1.21	1.21
29	D024	Dote faparchuli sadak	-	-	-	1.82	1.82
30	D025	Rajabas bajardada klose hudai marin khola sadak	-	-	-	1.60	1.60
31	D026	Tunibhanjyang gopedada klose hudai marin khola sadak	-	-	-	2.71	2.71
32	D027	Tunibhanjyang besitol hudai school samma sadak	-	-	-	1.29	1.29
Grand Total			**0.05**	**58.62**	**11.99**	**34.19**	**104.85**

WARD No. 02

S.N	Road Code	Road Name	Approx. Length (Km)				Total
			Concrete	Earthen	Gravelled	New Track	
1	A001	Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak	-	-	5.25	-	5.25
2	B002	Satdobato bastipur hudai faparchuli sadak	-	2.36	-	4.05	6.41
3	B003	Chandanpur dekhi satdobato main sadak	-	12.19	-	-	12.19
4	C003	Lipekhola dalinbhanjyang majhigau hudai chalise samma sadak	-	2.63	-	-	2.63
5	C004	Swara aahaldada hudai ookhle samma sadak	-	1.46	-	2.07	3.53
6	C005	Bhaise dekhi godre hudai bastipur jane bato	-	3.75	-	-	3.75
7	D028	Dalinbhyanjang dekhi lipedada sadak	-	1.00	-	-	1.00
8	D029	Chiurebas jane bato	-	3.46	-	-	3.46
9	D030	Hayutar hudai Nepal SBI bank jane bato	0.03	0.44	-	-	0.48
10	D031	Woda karyalaye 2 jane bato	-	0.17	-	-	0.17
11	D032	Hayutar hirding sadak	-	1.63	-	-	1.63
12	D033	Gaapaa Jane bato	-	0.19	-	-	0.19
13	D034	Aapdada Sano Bhakteni hudai thulo bhakteni jane sadak	-	2.89	-	-	2.89
14	D035	Chandanpur Khola gau sadak	-	4.70	-	-	4.70
15	D036	Salle dekhi marin khola sadak	-	1.62	-	-	1.62
16	D037	Bhaise pradhantol hudai charghare sadak	-	1.56	-	-	1.56
17	D038	Satdobato dekhi bastipur sadak	-	1.46	-	-	1.46
18	D039	Bhaise dekhi aadheri samma sadak	-	1.20	-	0.52	1.72
19	D040	Satdobato dekhi aadheri samma sadak	-	1.52	-	-	1.52
20	D041	Lapse aadheri vaise sadak	-	-	-	0.81	0.81
21	D047	Mahila bhawan jane bato	-	0.07	-	-	0.07

S.N	Road Code	Road Name	Approx. Length (Km)				Total
			Concrete	Earthen	Gravelled	New Track	
22	D048	Krisi sakha karyelaye jane bato	-	0.07	-	-	0.07
23	D049	Kerabari school jane bato	-	0.21	-	-	0.21
24	D095	Bastipur hudai kaule baseri motipur sadak	-	-	-	4.47	4.47
25	D096	Tallo gaira magar tol jodne sadak	-	0.81	-	-	0.81
Grand Total			**0.03**	**45.39**	**5.25**	**11.93**	**62.60**

WARD No. 03

S.N	Road Code	Road Name	Approx. Length (Km)			Total
			Earthen	Gravelled	New Track	
1	A001	Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak	4.45	2.59	-	7.04
2	A003	Kapilakot Madhubani Rampur bajar hudai Netrakali Kusheshwor Dumja Sadak	5.12	-	-	5.12
3	B004	Solabhanjyang chilaune pachghare lapse hudai satdobato sadak	12.52	-	0.54	13.06
4	B005	Rampur bhaisefat chhabise chaukitar sadak	-	-	1.35	1.35
5	C006	Tamajor gothdada bhanjyang sadak	3.75	-	-	3.75
6	D041	Lapse aadheri vaise sadak	-	-	0.98	0.98
7	D042	Lapse magardada hudai majhuwatham jane sadak	3.22	-	0.71	3.94
8	D043	Koltar gurase sambhudada sadak	2.77	-	0.78	3.55
9	D044	Gurase kami basti sadak	0.46	-	-	0.46
10	D045	Koltar ratu khola kalisir sadak	1.25	-	1.02	2.27
11	D046	Koltar katle sadak	0.84	-	0.33	1.17
12	D050	Solabhanjyang dodh hudai sirise Ghising dada jane sadak	2.66	-	0.54	3.19
13	D051	Sirise marin khola sadak	-	-	1.09	1.09
14	D052	Tinghare bhatmas dada sadak	-	-	0.41	0.41
15	D053	Pachghare vedekharka sadak	-	-	0.82	0.82
16	D054	Tamajor Bhadaure kholsi dekhi keuraghari hudai pachghare dhunge samma sadak	5.07	-	-	5.07
17	D055	Pachghare bisauni dada sadak	-	-	0.40	0.40
18	D056	Tamajor sirantol dekhi pachghare fedi sadak	-	-	0.93	0.93
19	D057	Tamajor Sombare pachabhaiya sadak	-	-	2.25	2.25
20	D058	Tamajor red cross vawan hudai rato dada sadak	0.53	-	0.09	0.62
21	D059	Tamajor khola hudai chilaune dada sadak	3.34	-	-	3.34

S.N	Road Code	Road Name	Approx. Length (Km)			Total
			Earthen	Gravelled	New Track	
22	D060	Chaukitar chilaune dada sadak	-	-	1.17	1.17
23	D061	Chaukitar jagajite dada sadak	0.64	-	-	0.64
24	D062	Solobhanjyang Mathillo aahale sadak	2.21	-	-	2.21
25	D063	Mathillo aahale kalikhola sadak	-	-	1.77	1.77
26	D067	Kerabari sadak	0.92	-	0.26	1.18
27	D068	Baghmara manepakha barelidada hudai kerabari sadak	0.81	-	0.46	1.27
28	D069	Tamajor varrafedi dekhi baghmara sadak	-	-	0.53	0.53
29	D070	Netrakali mabi talkudada baghmare hudai dhaden aarubot sadak	3.99	-	-	3.99
30	D071	Tamajor baghmara sadak	-	-	0.31	0.31
31	D072	Talkudada sadak	0.31	-	-	0.31
32	D073	Sirantol swasthe chauki jane sadak	0.21	-	-	0.21
33	D074	Tekanpur baseni kholaghari sadak	-	-	2.53	2.53
34	D097	Tamajor kholaghari majhuwa motor bato	-	-	4.09	4.09
Grand Total			**55.04**	**2.59**	**23.35**	**80.97**

WARD No. 04

S.N	Road Code	Road Name	Approx. Length (Km)		Total
			Earthen	New Track	
1	A001	Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak	0.62	-	0.62
2	A003	Kapilakot Madhubani Rampur bajar hudai Netrakali Kusheshwor Dumja Sadak	13.99	-	13.99
3	A004	Bandipur gope ramvede jugepani sadak	8.20	0.90	9.10
4	A005	Jugepani lakhank chaukidada sadak	5.40	-	5.40
5	A006	Rosi gapa Pakhurefedi thakurthan archale ratu rancha hudai mahabharat gaapaa sadak	4.24	-	4.24
6	B005	Rampur bhaisefat chhabise chaukitar sadak	4.78	-	4.78
7	B006	Kalikhola bokse hudai katauche madhubani jodne sadak	1.30	3.36	4.66
8	B008	Ramvede fedi gope hudai kamitol jodne sadak	-	1.49	1.49
9	C006	Tamajor gothdada bhanjyang sadak	2.74	-	2.74
10	C007	Gope mabi dekhi pakhure fedi garke sadak	5.54	-	5.54
11	C008	Narkate tallo aahale hudai mathillo aahale Sadak	2.09	1.24	3.33
12	C009	Aapdada Barabise sadak	2.27	-	2.27
13	C010	Simle fedi dekhi health post hudai sahakari dada jodne sadak	1.07	0.60	1.67
14	C011	Damaidada magardada sadak	1.56	0.61	2.17
15	C012	Bhaise rampur sadak	1.86	-	1.86
16	C013	Swayuridada Pahirodada jhagaredada jyamiredada hudai rampur sadak	5.73	-	5.73
17	C014	Pahiro bhanjyang bhorthum kudule rampur bazar sadak	1.82	-	1.82
18	D064	Aahale masanghat sadak	0.45	1.12	1.57
19	D065	Chaukitar Sirutar sarpakhop sadak	0.51	0.73	1.24
20	D066	Chhabise Kapase sadak	0.47	-	0.47
21	D075	Jure aadhamara sadak	-	2.34	2.34

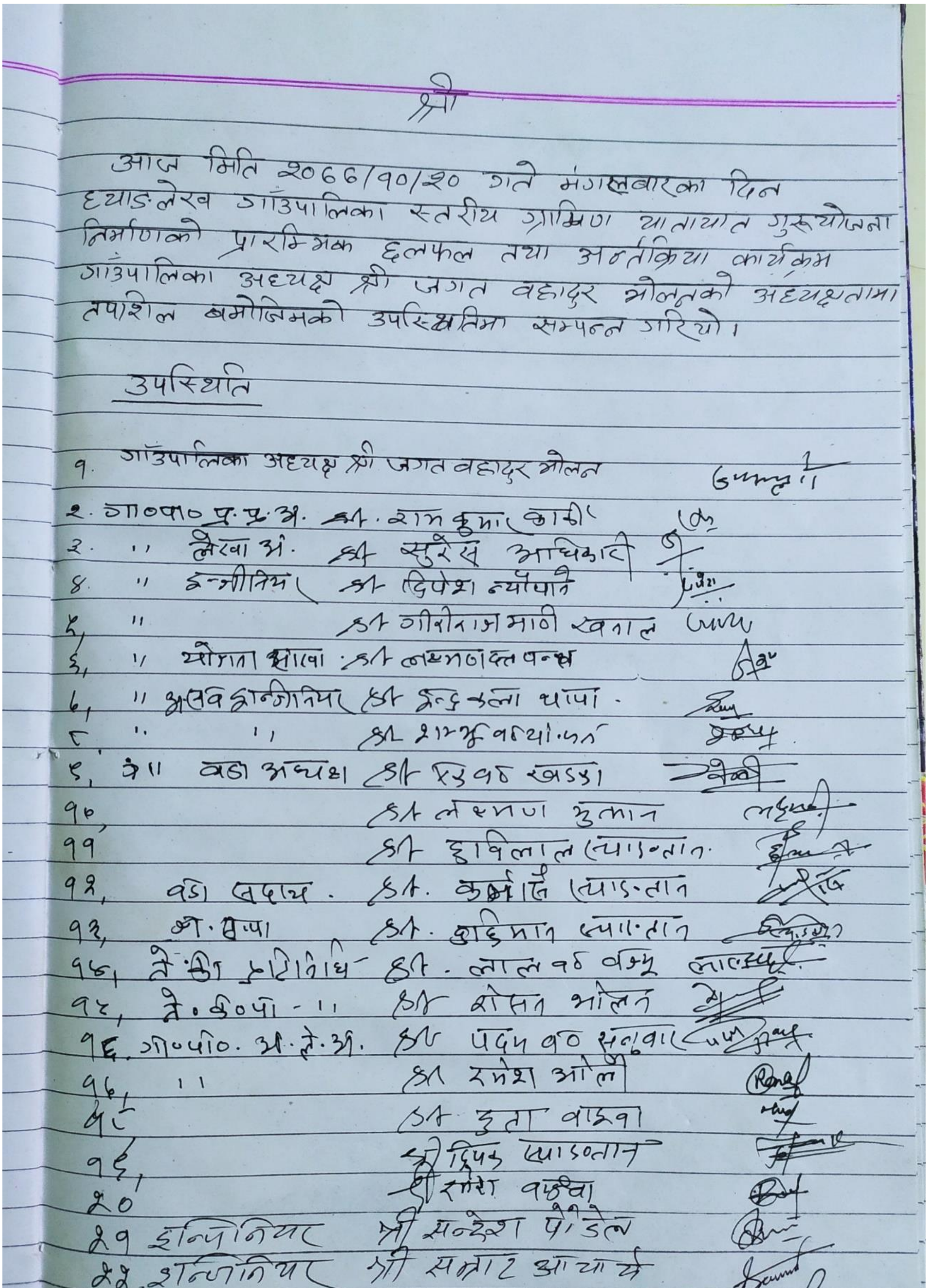
S.N	Road Code	Road Name	Approx. Length (Km)		Total
			Earthen	New Track	
22	D076	Simhayutar muldada hudai pahiro bhanjyang sadak	1.66	1.55	3.22
23	D077	Gothdada ghising tol sadak	0.87	-	0.87
24	D078	Chaukidada goth dada sadak	2.15	-	2.15
25	D079	Majhuwa thumka dekhi barabhise sadak	0.94	1.76	2.70
26	D080	Lakhank teenghare majhuwa sadak	1.49	2.06	3.55
27	D081	Dothe dekhi puchhartol hudai pakhuri jodne sadak	-	1.91	1.91
28	D082	Bandipur gau dekhi thansing dada sadak	-	1.14	1.14
29	D083	Bhorthum bagartol sadak	0.85	0.92	1.76
30	D098	Charghare motor bato	-	1.01	1.01
31	D099	Bandipur sauradada keraubari pipalbot sadak	-	3.38	3.38
Grand Total			**72.61**	**26.12**	**98.73**

WARD No. 05

S.N	Road Code	Road Name	Approx. Length (Km)		Total
			Earthen	New Track	
1	A003	Kapilakot Madhubani Rampur bajar hudai Netrakali Kusheshwor Dumja Sadak	7.26	-	7.26
2	A006	Rosi gapa Pakhurefedi thakurthan archale ratu rancha hudai mahabharat gaapaa sadak	9.37	3.53	12.91
3	A007	Archale Kanflongdong Hattiaahal dekhi rancha motor bato	0.67	2.46	3.13
4	B007	Matokhani kundule besitol rampur bajar Marin Gaapaa hudai lalbandi motor bato	0.55	1.95	2.50
5	B008	Ramvede fedi gope hudai kamitol jodne sadak	-	0.97	0.97
6	B009	Thakuridada Paharilekh Jugepani sadak	10.26	-	10.26
7	B010	Archale chainpur singpal hudai Jugepani sadak (Kalodhunga/piple samma)	18.10	-	18.10
8	B011	Dothe Rancha sadak	-	0.95	0.95
9	B012	Singpal Paharilekh Jugepani sadak	-	3.77	3.77
10	C014	Pahiro bhanjyang bhorthum kudule rampur bazar sadak	1.24	-	1.24
11	D082	Bandipur gau dekhi thansing dada sadak	-	1.76	1.76
12	D083	Bhorthum bagartol sadak	-	0.77	0.77
13	D084	Charghare motor bato	0.63	-	0.63
14	D085	Ghatteswara paktungdada hudai dothe motor bato	-	2.25	2.25
15	D086	Garke ramailo basti hudai rampur dada motor bato	3.04	-	3.04
16	D087	Pakhurefedi devithan hudai paharilekh motor bato	-	2.38	2.38
17	D088	Khanikhola kharibot dothe motor bato	1.58	-	1.58
18	D089	Rampur khanikhola gyandada chainpur motor bato	3.80	-	3.80
19	D090	Jogidada sandhane motor bato	0.74	-	0.74
20	D091	Singpal ranagau motor bato	0.99	0.40	1.39
21	D092	Kolbote dakshinkali motor bato	1.06	-	1.06

S.N	Road Code	Road Name	Approx. Length (Km)		Total
			Earthen	New Track	
22	D093	Pipalbhyanjang dakshinkali motor bato	2.28	0.88	3.15
23	D094	Ratudovan hudai budumchuli motor bato	3.40	0.58	3.99
24	D100	Darigau dothe motor bato	-	2.41	2.41
25	D101	Rampur bazar darigau motor bato	-	1.33	1.33
26	D102	Ratu saitar motor bato	-	0.87	0.87
27	D103	Barbare motor bato	-	0.76	0.76
Grand Total			**64.98**	**26.68**	**91.66**

ANNEX-II: Minuting Record of Meetings



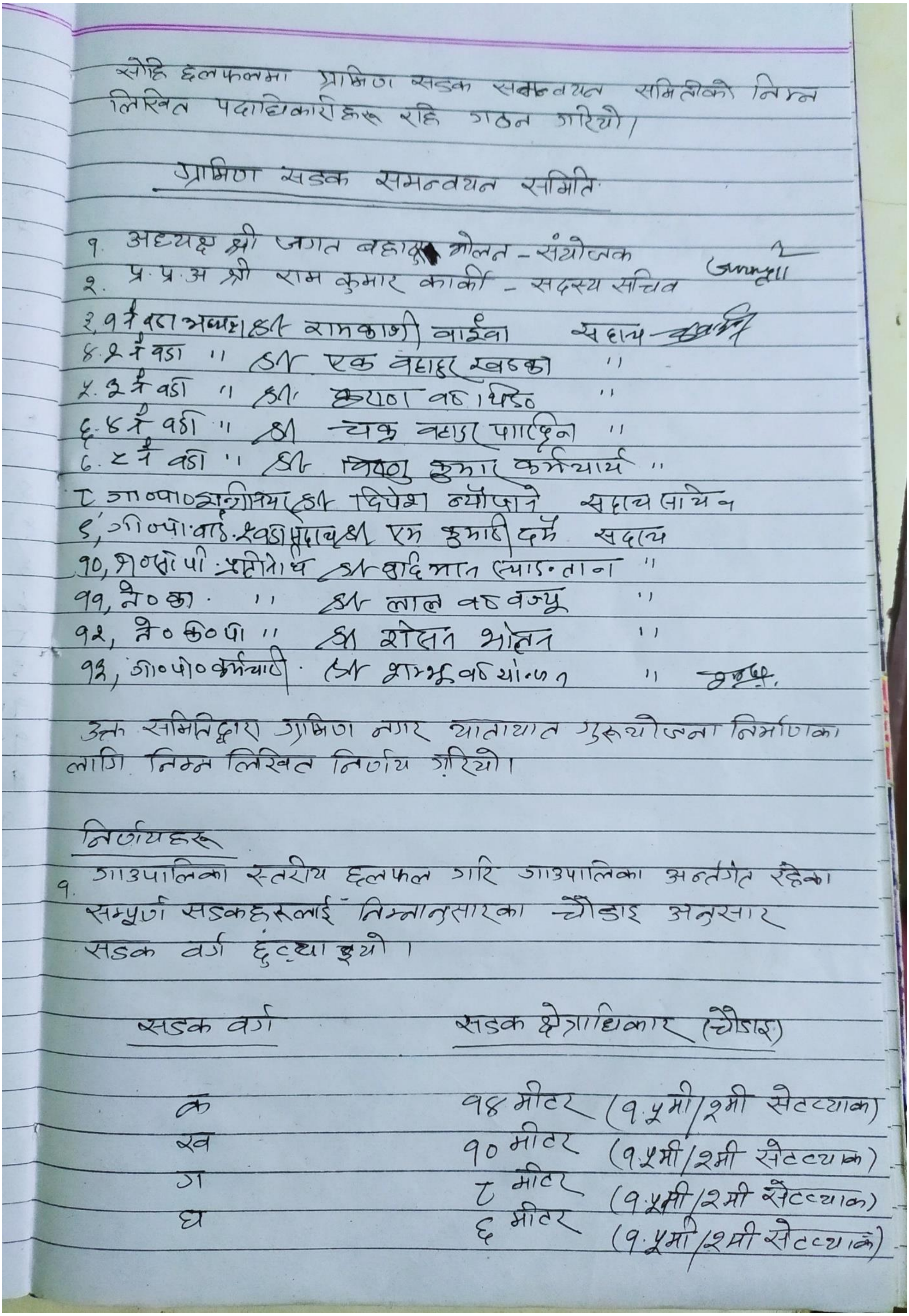
श्री

आज मिति २०७८/१०/२० गते मंगलबारका दिन घ्याङलेख गाउँपालिका स्तरीय ग्रामिण यातायात गुरुयोजना निर्माणको प्रारम्भिक छलफल तथा अन्तर्क्रिया कार्यक्रम गाउँपालिका अध्यक्ष श्री जगत बहादुर थोलनको अध्यक्षतामा तपशिल बमोजिमको उपस्थितिमा सम्पन्न गरियो।

उपस्थिति

१. गाउँपालिका अध्यक्ष श्री जगत बहादुर थोलन
२. गा०पा० प्र.प्र.अ. श्री राम कुमार कार्की
३. " लेखा अ. श्री सुरेश अधिकारी
४. " इन्जीनियर श्री दिपेश न्यौपाने
५, " श्री गीरीराज माली खनाल
६, " योजना शाखा : श्री लक्ष्मणदत्त पन्थ
७, " अ.सब इन्जीनियर श्री इन्दु कला थापा
८, " " श्री रञ्जु बस्याल
९, ३ " वडा अध्यक्ष श्री रुद्र ब० खड्का
१०, श्री लक्ष्मण थुलान
११, श्री ह्वाविलाल त्याङतान
१२, वडा सदस्य. श्री. कर्माति त्याङतान
१३, श्री. मुख्य श्री. छुद्रमान त्याङतान
१४, नै.क.पा प्रतिनिधि श्री. लाल ब० थापा
१५, नै.कांग्रेस - " श्री रोशन थोलन
१६, गा०पा०. अ.नै.अ. श्री पदम ब० सुनुवार
१७, " श्री रमेश ओली
१८, श्री हुता वाइबा
१९, श्री दिपक घ्याङतान
२०, श्री सोरो वईवा
२१ इन्जिनियर श्री सन्देश पौडेल
२२, इन्जिनियर श्री सम्राट आचार्य
२३, श्री उत्तर वाइबा
२४ ५ वडा अध्यक्ष श्री रामकाजी वाइबा
२५,

Figure 25: Minuting Record of Orientation Program at the RM Office



सोहि छलफलमा ग्रामिण सडक समन्वयन समितिको निम्न लिखित पदाधिकारीहरू रहि गठन गरियो।

ग्रामिण सडक समन्वयन समिति

१. अध्यक्ष श्री जगत बहादुर गोलन - संयोजक
२. प्र.प्र.अ श्री राम कुमार कार्की - सदस्य सचिव
३. १ नं वडा अध्यक्ष श्री रामकाजी घाईवा सदस्य
४. २ नं वडा " श्री एक बहादुर खड्का "
५. ३ नं वडा " श्री कृष्ण बहादुर घिसिङ "
६. ४ नं वडा " श्री चक्र बहादुर पाख्रिन "
७. ५ नं वडा " श्री विष्णु कुमार कर्माचार्य "
८. गा.पा.प्राविधिक श्री दिपेश न्यौपाने सदस्य सचिव
९. गा.पा.वार्ड स्तरीय प्रतिनिधि श्री एम कुमारी दर्जी सदस्य
१०. म.स्वा.पा. प्रतिनिधि श्री बादि मान स्याङतान "
११. नै.का. " श्री लाल बहादुर वज्यु "
१२. नै.क.पा " श्री रोशन गोलन "
१३. गा.पा.कर्मचारी श्री शम्भु बहादुर थोकर "

उक्त समितिद्वारा ग्रामिण नगर यातायात गुरुयोजना निर्माणका लागि निम्न लिखित निर्णय गरियो।

निर्णयहरू

१. गाउँपालिका स्तरीय छलफल गरि गाउँपालिका अन्तर्गत रहेका सम्पूर्ण सडकहरूलाई निम्नानुसारका चौडाइ अनुसार सडक वर्ग छुट्याइयो।

सडक वर्ग	सडक क्षेत्राधिकार (चौडाइ)
क	१४ मीटर (१.५मी/२मी सेटब्याक)
ख	१० मीटर (१.५मी/२मी सेटब्याक)
ग	८ मीटर (१.५मी/२मी सेटब्याक)
घ	६ मीटर (१.५मी/२मी सेटब्याक)

Figure 26: Minuting Record of Orientation Program at the RM Office

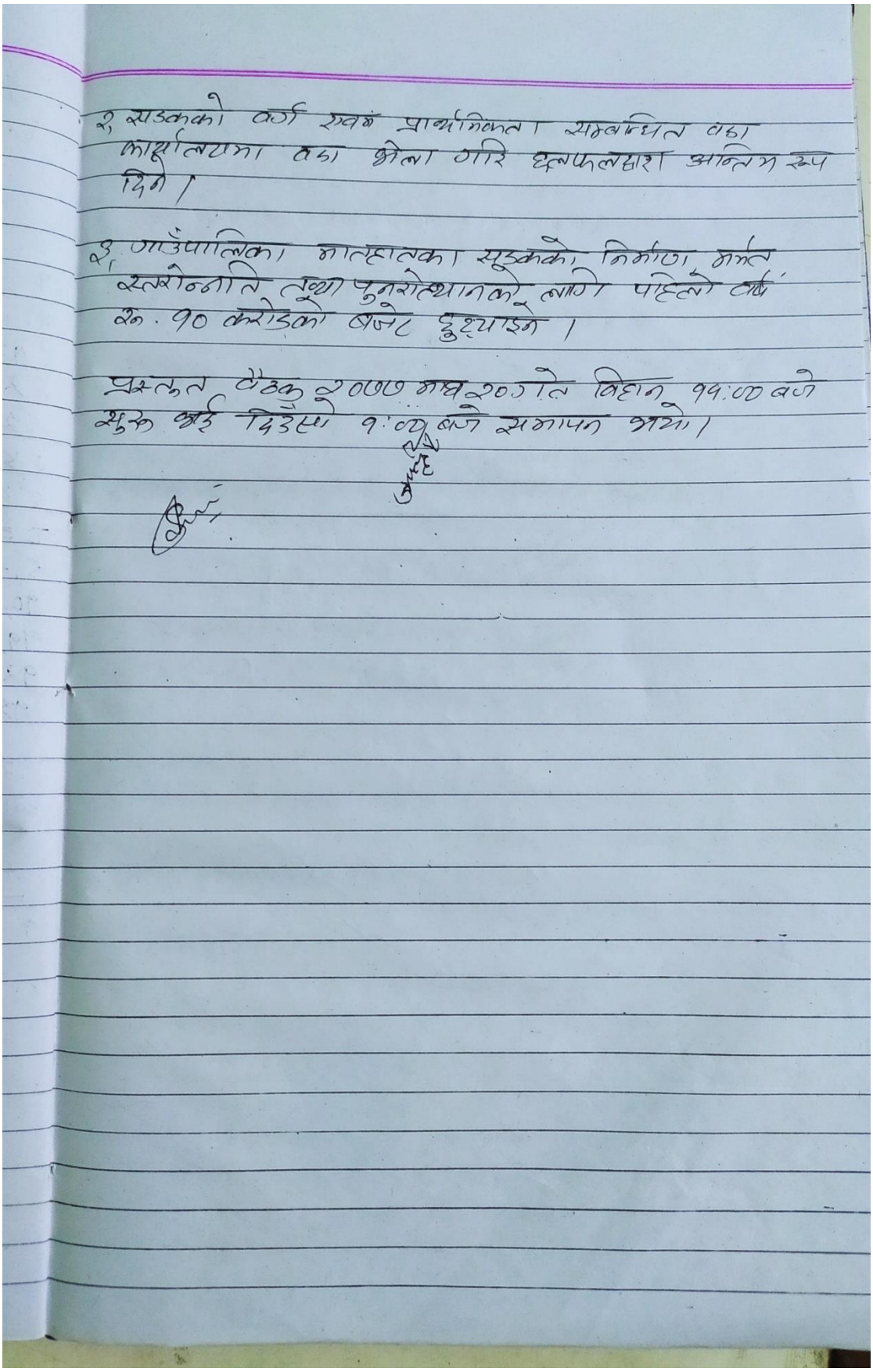
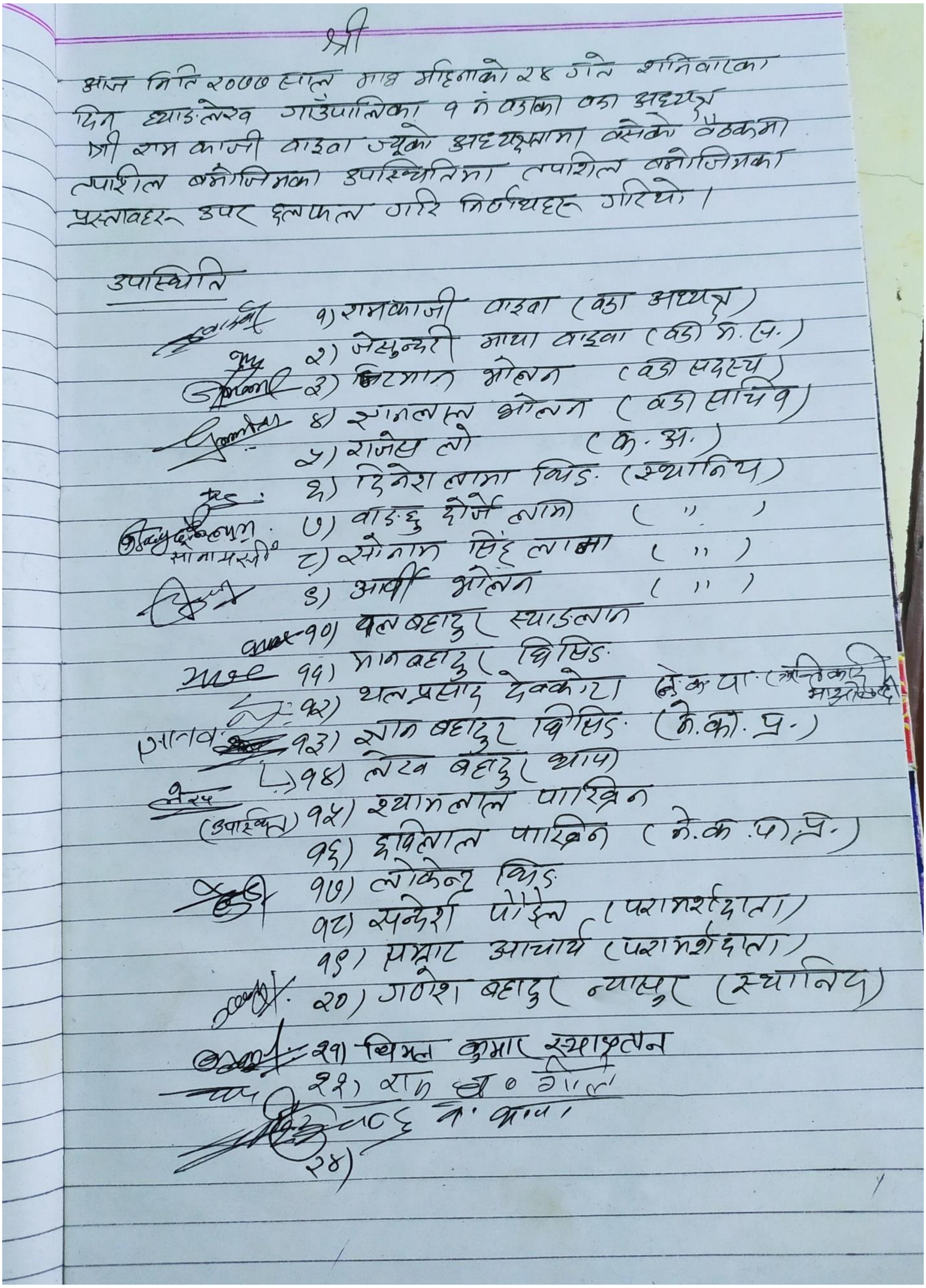


Figure 27: Minuting Record of Orientation Program at the RM Office



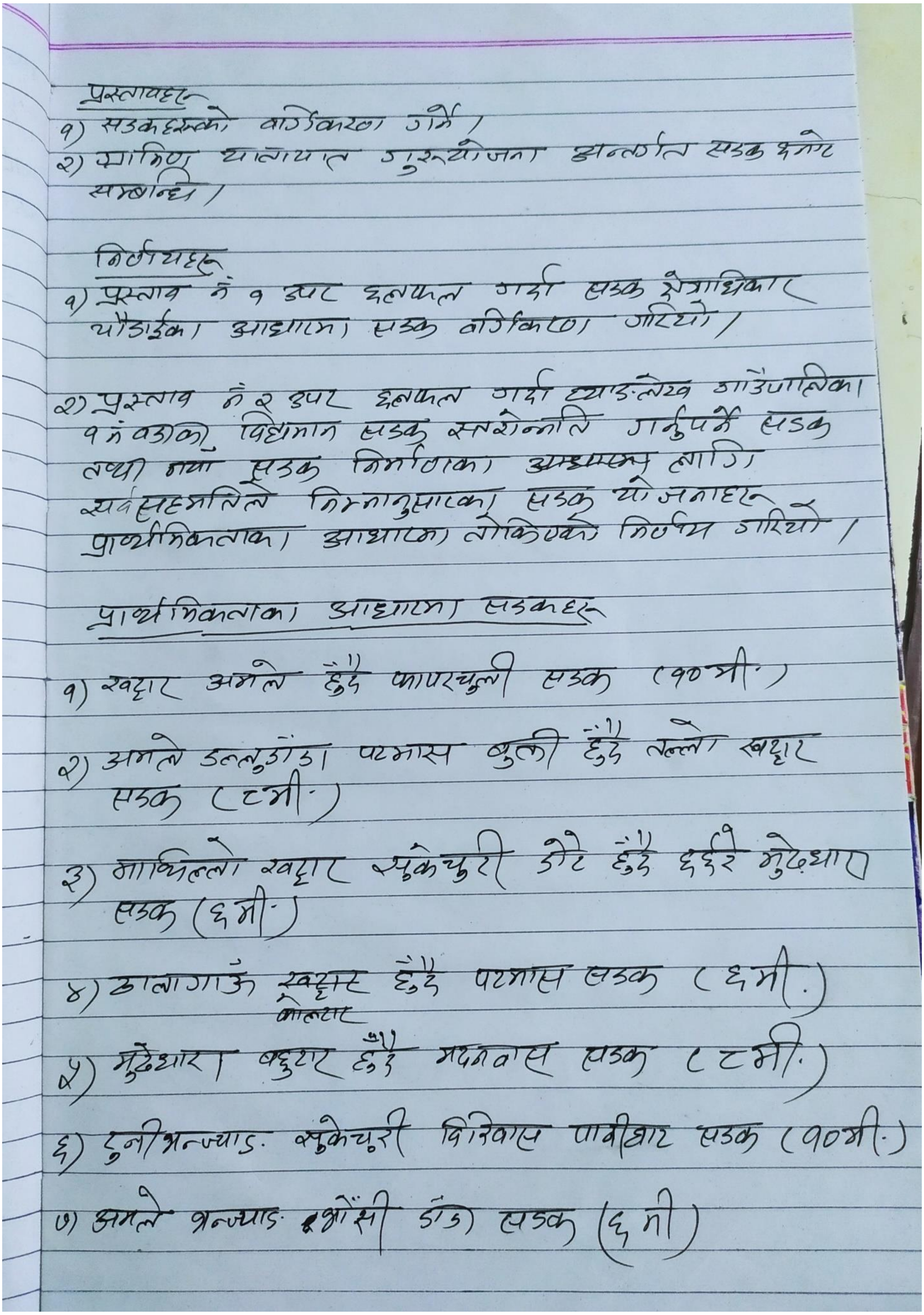
श्री

आज मिति २०७७ साल माघ महिनाको २४ गते शनिवारका दिन घ्याङलेख गाउँपालिका १ नं वडाको वडा अध्यक्ष श्री राम काजी वाइवा ज्यूको अध्यक्षतामा बसेको बैठकमा तपशिल बमोजिमका उपस्थितिमा तपशिल बमोजिमका प्रस्तावहरू उपर छलफल गरि निर्णयहरू गरियो।

उपस्थिति

१) रामकाजी वाइवा (वडा अध्यक्ष)
२) जेसुन्दरी माया वाइवा (वडा म.स.)
३) हिरामान मोक्तान (वडा सदस्य)
४) रामलाल मोक्तान (वडा सचिव)
५) राजेश लो (क.अ.)
६) दिनेश लामा थिङ (स्थानिय)
७) वाङ्छु दोर्जे लामा (")
८) सोनाम सिंह लामा (")
९) आर्वी मोक्तान (")
१०) बल बहादुर स्याङतान
११) मान बहादुर थिङ
१२) थल प्रसाद देवकोटा ने.क.पा. ([illegible])
१३) ज्ञान बहादुर थिङ (ने.का.प्र.)
१४) लेख बहादुर थापा
१५) श्यामलाल पाखिन
१६) हरिलाल पाखिन (ने.क.पा.प्र.)
१७) लोकेन्द्र थिङ
१८) सन्देश पौडेल (परामर्शदाता)
१९) सम्राट आचार्य (परामर्शदाता)
२०) गणेश बहादुर न्यास्रु (स्थानिय)
२१) विमल कुमार स्याङतान
२२) राम ब. [illegible]
२३) [illegible]
२४)

Figure 28: Minuting Record of Meeting at the Ward 01



प्रस्तावहरू

१) सडकहरूको वर्गीकरण गर्ने ।

२) ग्रामिण यातायात गुरुयोजना अन्तर्गत सडक [illegible] सम्बन्धि ।

निर्णयहरू

१) प्रस्ताव नं १ उपर छलफल गर्दा सडक क्षेत्राधिकार चौडाईका आधारमा सडक वर्गीकरण गरियो ।

२) प्रस्ताव नं २ उपर छलफल गर्दा घ्याङलेख गाउँपालिका १ नं वडाको विद्यमान सडक स्तरोन्नति गर्नुपर्ने सडक तथा नयाँ सडक निर्माणका प्रस्तावहरू लागि सर्वसहमतिले निम्नानुसारका सडक योजनाहरू प्राथमिकताका आधारमा तोकिएको निर्णय गरियो ।

प्राथमिकताका आधारमा सडकहरू

१) खद्दार अमले हुँदै फापरचुली सडक (१०मी.)

२) अमले डल्लुडाँडा परमास बुकी हुँदै तल्लो खद्दार सडक (८मी.)

३) माथिल्लो खद्दार स्युकेचुरी डोरे हुँदै दहरे मुढेधारा सडक (६मी.)

४) डालागाउँ खद्दार हुँदै परमास सडक (६मी.)

५) मुढेधारा बहुदार हुँदै मदनवास सडक (८मी.)

६) दुनीभन्ज्याङ स्युकेचुरी विरिवास पावीधार सडक (१०मी.)

७) अमले भन्ज्याङ औंसी डाँडा सडक (६मी)

Figure 29: Minuting Record of Meeting at the Ward 01

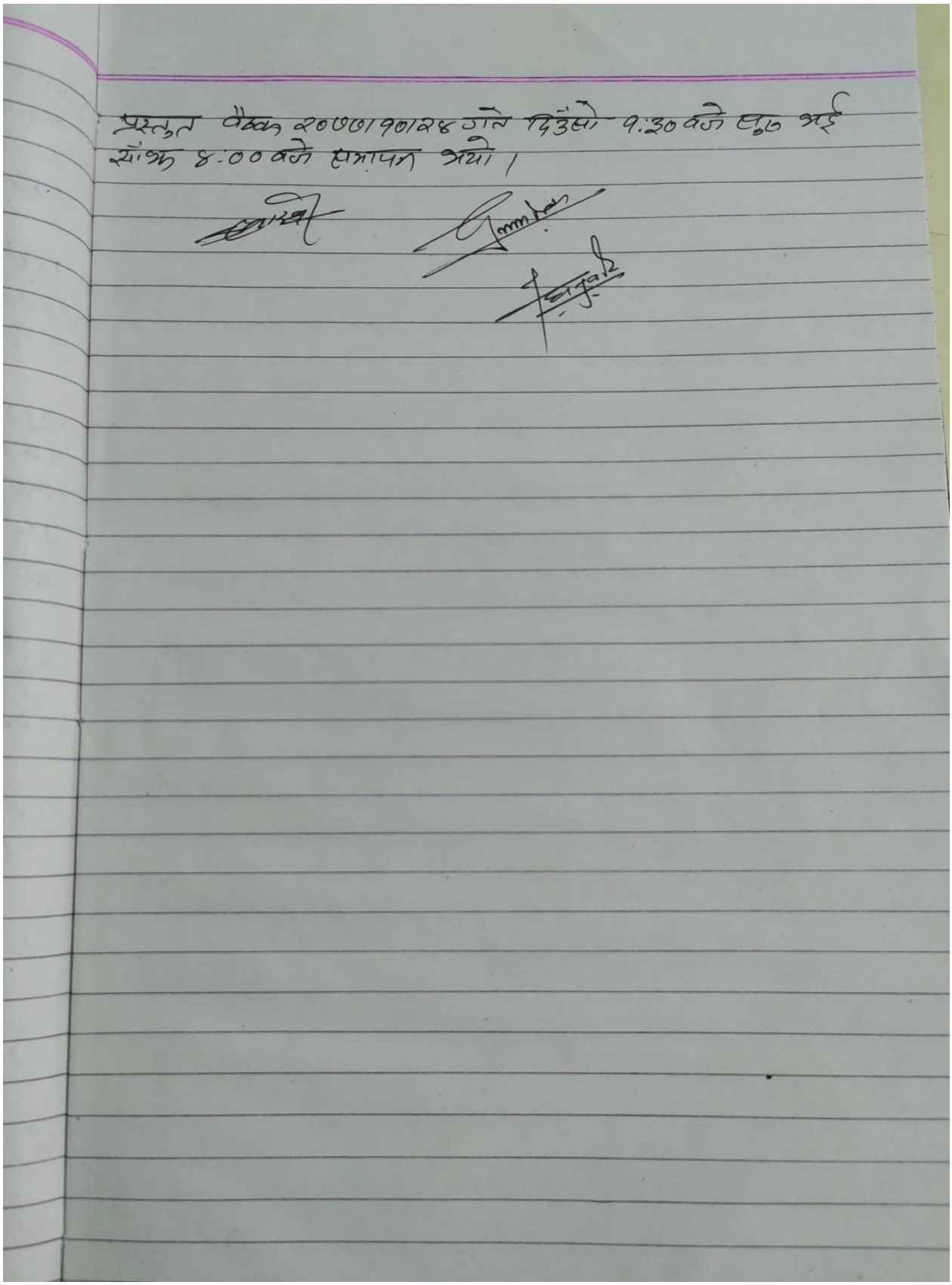
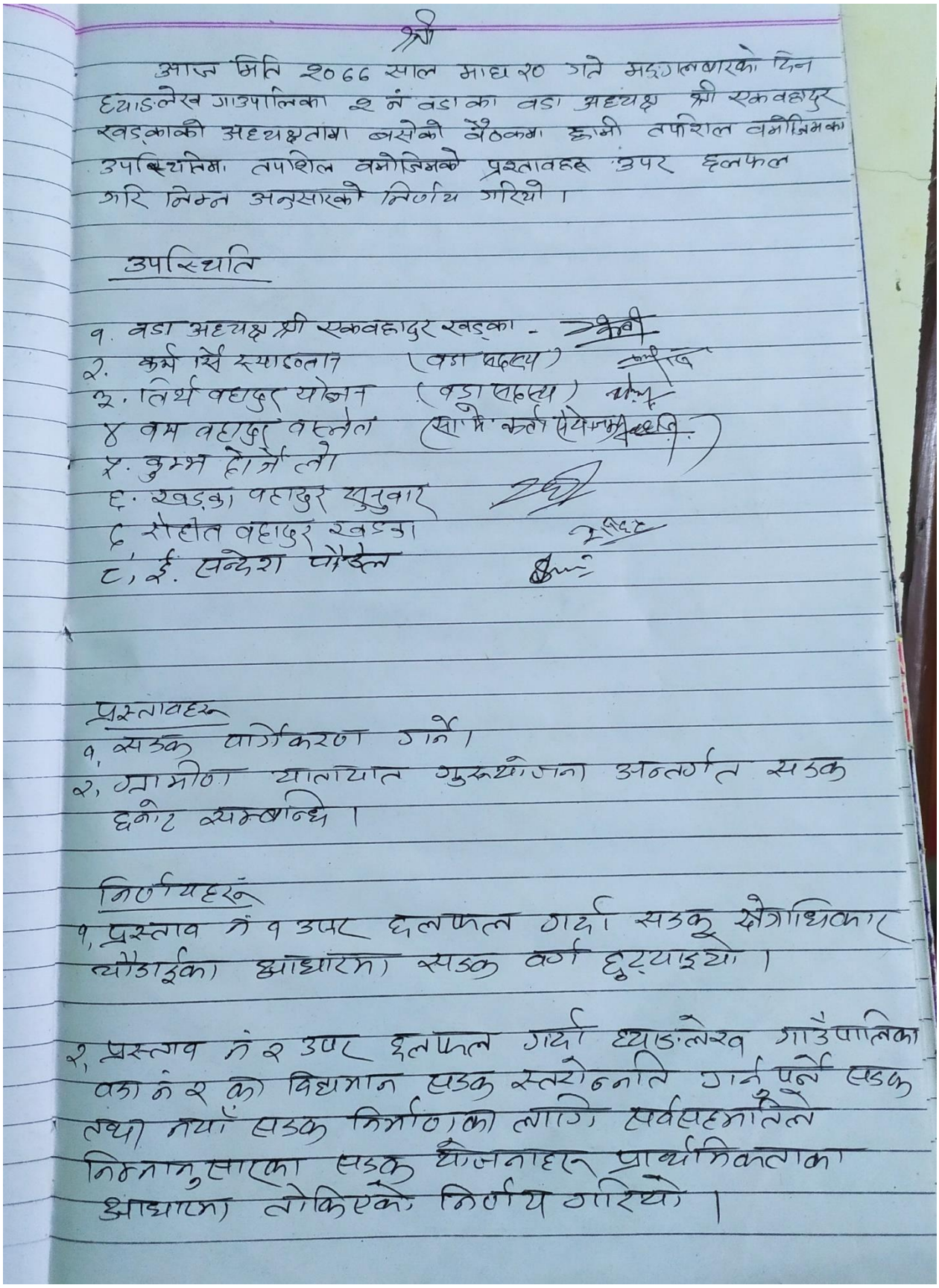


Figure 30: Minuting Record of Meeting at the Ward 01



श्री

आज मिति २०६६ साल माघ २० गते मङ्गलबारको दिन घ्याङलेख गाउपालिका ६ नं वडा का वडा अध्यक्ष श्री एकबहादुर खड्काको अध्यक्षतामा बसेको बैठकमा हामी तपाशिल बमोजिमका उपस्थितिमा तपाशिल बमोजिमको प्रस्तावहरु उपर छलफल गरि निम्न अनुसारको निर्णय गरियो।

उपस्थिति

१. वडा अध्यक्ष श्री एकबहादुर खड्का - अध्यक्ष
२. कर्म बहादुर स्याङ्तान (वडा सदस्य)
३. तिर्थ बहादुर योञ्जन (वडा सदस्य)
४ वम बहादुर वस्नेत (सामाजिक कार्यकर्ता)
५. कुम्भ होर्जे तो
६. खड्क बहादुर थुदुवार
७ रोहित बहादुर खड्का
८, ई. सन्देश पौडेल

प्रस्तावहरु

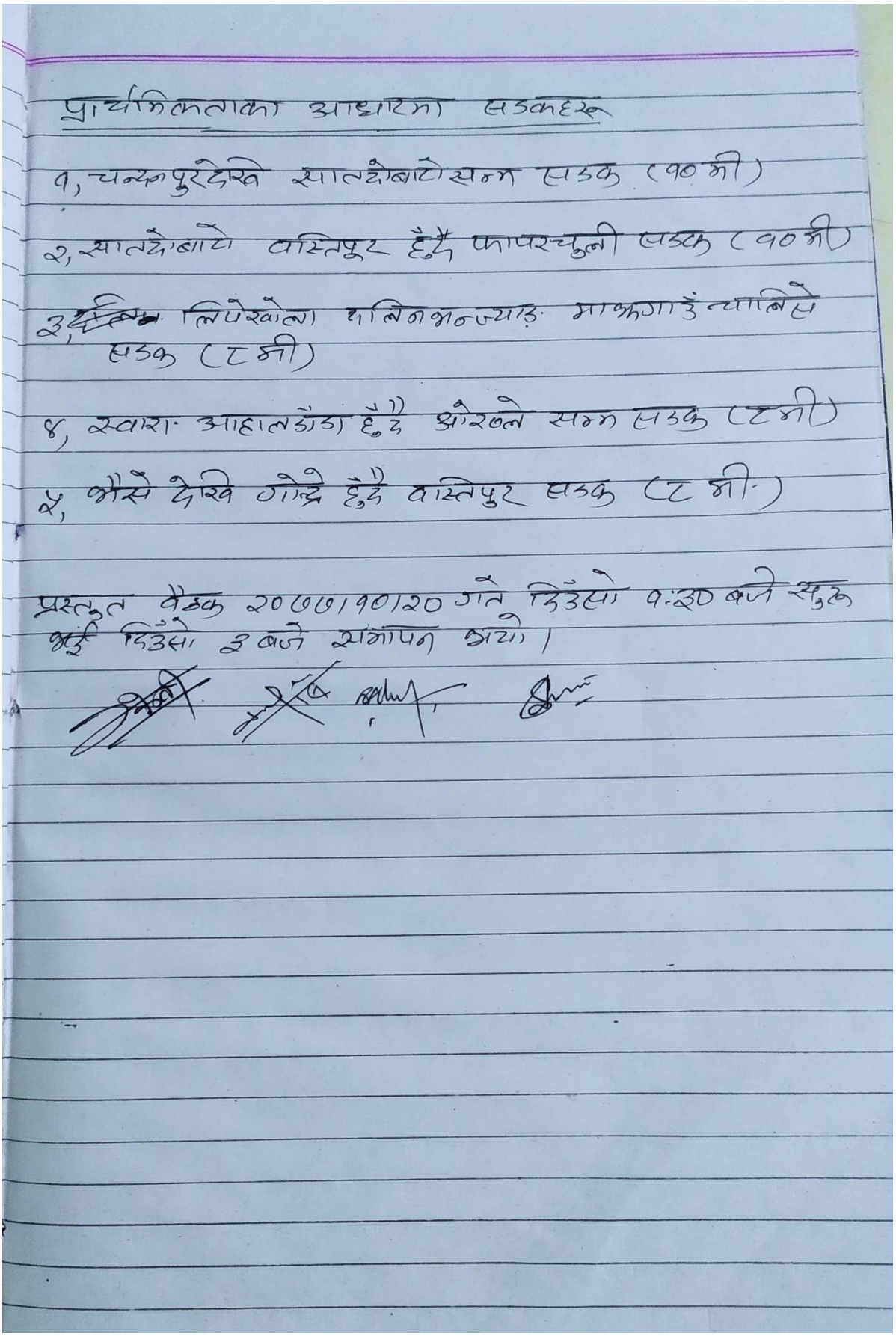
१, सडक पार्श्वीकरण गर्ने।
२, ग्रामीण यातायात पुरुथ्वीजना अन्तर्गत सडक छनौट सम्बन्धि।

निर्णयहरु

१, प्रस्ताव नं १ उपर छलफल गर्दा सडक क्षेत्राधिकार चौडाईका आधारमा सडक वर्ग छुट्याइयो।

२, प्रस्ताव नं २ उपर छलफल गर्दा घ्याङलेख गाउँपालिका वडा नं २ को विद्यमान सडक स्तरोन्नति गर्नुपर्ने सडक तथा नयाँ सडक निर्माणको लागि सर्वसहमतिले निम्नानुसारको सडक छनौटहरु प्राथमिकताका आधारमा तोकिएको निर्णय गरियो।

Figure 31: Minuting Record of Meeting at the Ward 02


प्राथमिकताका आधारमा सडकहरू

१, चन्दनपुरदेखि सातदोबाटोसम्म सडक (१० मी)

२, सातदोबाटो बस्तिपुर हुँदै फापरचुली सडक (१० मी)

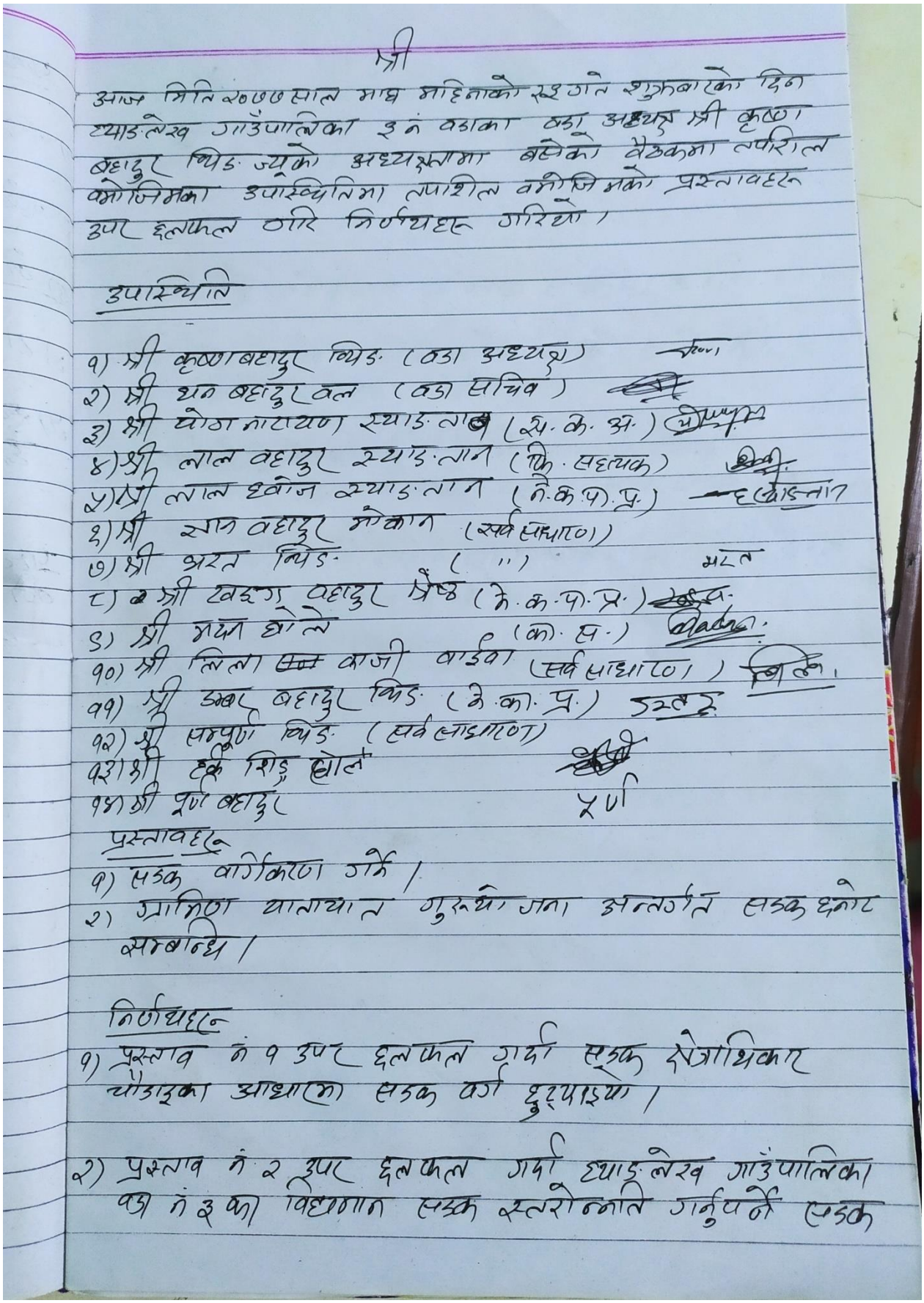
३, लिपेखोला धलिनभन्ज्याङ माकुगाउँ चाखिपे सडक (८ मी)

४, स्वारा आहालडाँडा हुँदै ओरछले सम्म सडक (८ मी)

५, भौसे देखि गोठे हुँदै बस्तिपुर सडक (८ मी.)

प्रस्तुत बैठक २०७७।१०।२० गते दिउँसो १:३० बजे सुरु भई दिउँसो ३ बजे समापन भयो।

Figure 32: Minuting Record of Meeting at the Ward 02



श्री

आज मिति २०७७ साल माघ महिनाको १४ गते शुक्रबारको दिन ध्याङलेख गाउँपालिका ३ नं वडाका वडा अध्यक्ष श्री कृष्ण बहादुर थिङ ज्यूको अध्यक्षतामा बसेको बैठकमा तपशिल बमोजिमका उपस्थितिमा तपशिल बमोजिमको प्रस्तावहरु उपर छलफल गरि निर्णयहरु गरियो ।

उपस्थिति

१) श्री कृष्णबहादुर थिङ (वडा अध्यक्ष)
२) श्री धन बहादुर बल (वडा सचिव)
३) श्री योगनारायण ध्याङताङ (प्र. क. अ.)
४) श्री लाल बहादुर ध्याङताङ (कि. सहयक)
५) श्री लाल धवोज ध्याङताङ (ने.क.प.प्र.)
६) श्री मान बहादुर मोकान (सर्वसाधारण)
७) श्री अरत थिङ (")
८) श्री खड्ग बहादुर श्रेष्ठ (ने.क.प.प्र.)
९) श्री मधन घोले (क.स.)
१०) श्री लिला काजी वाईबा (सर्वसाधारण)
११) श्री अक्क बहादुर थिङ (ने.का.प्र.)
१२) श्री सम्पुर्ण थिङ (सर्वसाधारण)
१३) श्री दुर्क शिङ्ग होल
१४) श्री पुर्ण बहादुर

प्रस्तावहरु

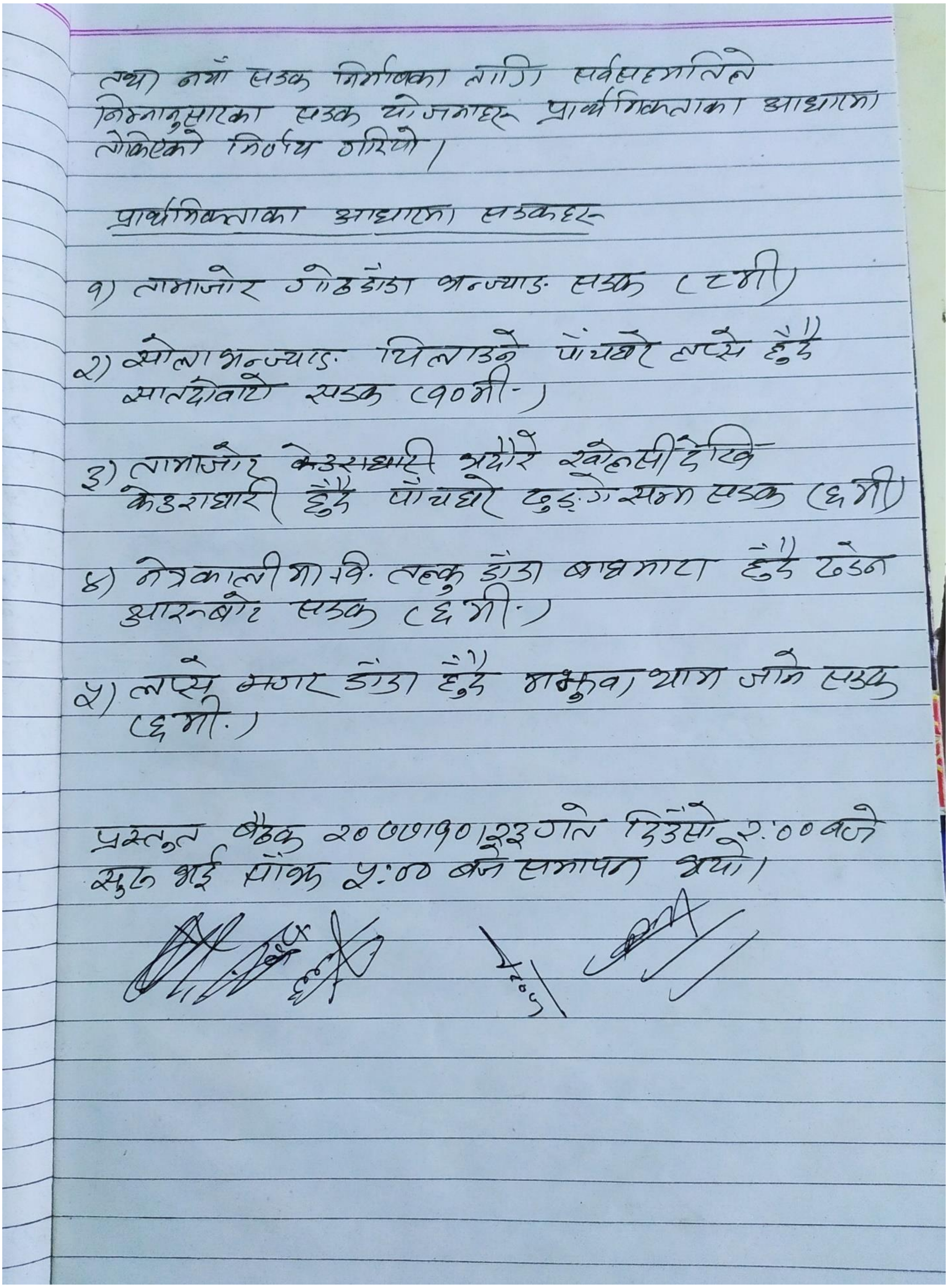
१) सडक वर्गीकरण गर्ने ।
२) ग्रामिण यातायात गुरुयोजना अन्तर्गत सडक छनोट सम्बन्धि ।

निर्णयहरु

१) प्रस्ताव नं १ उपर छलफल गर्दा सडक क्षेत्राधिकार चौडाइका आधारमा सडक वर्ग दुरुपाइयो ।

२) प्रस्ताव नं २ उपर छलफल गर्दा ध्याङलेख गाउँपालिका वडा नं ३ का विद्यमान सडक स्तरोन्नति गर्नुपर्ने सडक

Figure 33: Minuting Record of Meeting at the Ward 03


तथा नयाँ सडक निर्माणका लागि सर्वसम्मतिले निम्नानुसारका सडक योजनाहरू प्राथमिकताका आधारमा तोकिएको निर्णय गरियो।

प्राथमिकताका आधारमा सडकहरू

१) तामाजोर गोठडाँडा अन्ज्याङ सडक (८मी)

२) सोलाअन्ज्याङ पिलाउने पाँचघरे लप्से हुँदै सातघोवाटो सडक (१०मी.)

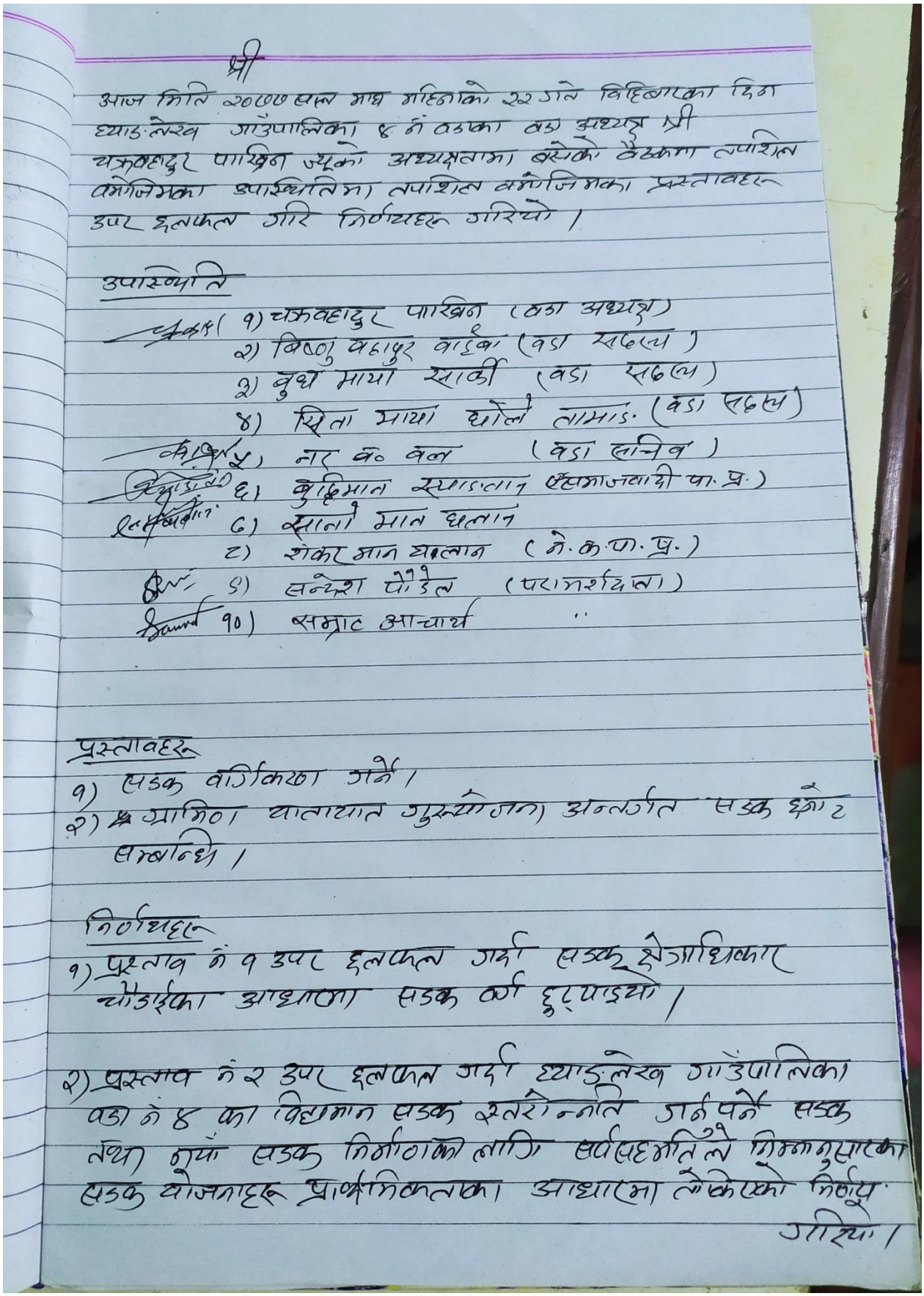
३) तामाजोर केउराघारी अघौरे खोलसीदेखि केउराघारी हुँदै पाँचघरे ढुङ्गेसमा सडक (६मी)

४) नेत्रकाली मा.वि. तल्कु डाँडा बाघमारा हुँदै ठडेन आरनबोर सडक (६मी.)

५) लप्से मगर डाँडा हुँदै गम्कुवा थाम जाने सडक (६मी.)

प्रस्तुत बैठक २०७७।१०।२३ गते दिउँसो २:०० बजे सुरु भई साँझ ५:०० बजे समापन भयो।

Figure 34: Minuting Record of Meeting at the Ward 03



श्री

आज मिति २०७७ साल माघ महिनाको २२ गते विहिवारका दिन घ्याङलेख गाउँपालिका ४ नं वडका वडा अध्यक्ष श्री चक्रबहादुर पाखिन ज्यूको अध्यक्षतामा बसेको बैठकमा तपशिल बमोजिमका उपस्थितिमा तपशिल बमोजिमका प्रस्तावहरु उपर छलफल गरि निर्णयहरु गरियो ।

उपस्थिति

१) चक्रबहादुर पाखिन (वडा अध्यक्ष)
२) विष्णु बहादुर बोहरा (वडा सदस्य)
३) बुधा माया खत्री (वडा सदस्य)
४) सिता माया घोर्ले तामाङ (वडा सदस्य)
५) नर बं० बल (वडा सचिव)
६) बुद्धिमान स्याङतान (एमाजवादी पा.प्र.)
७) खानी मान घलान
८) शंकर मान घलान (ने.क.पा.प्र.)
९) सन्देश पौडेल (परामर्शदाता)
१०) सम्राट आचार्य

प्रस्तावहरु

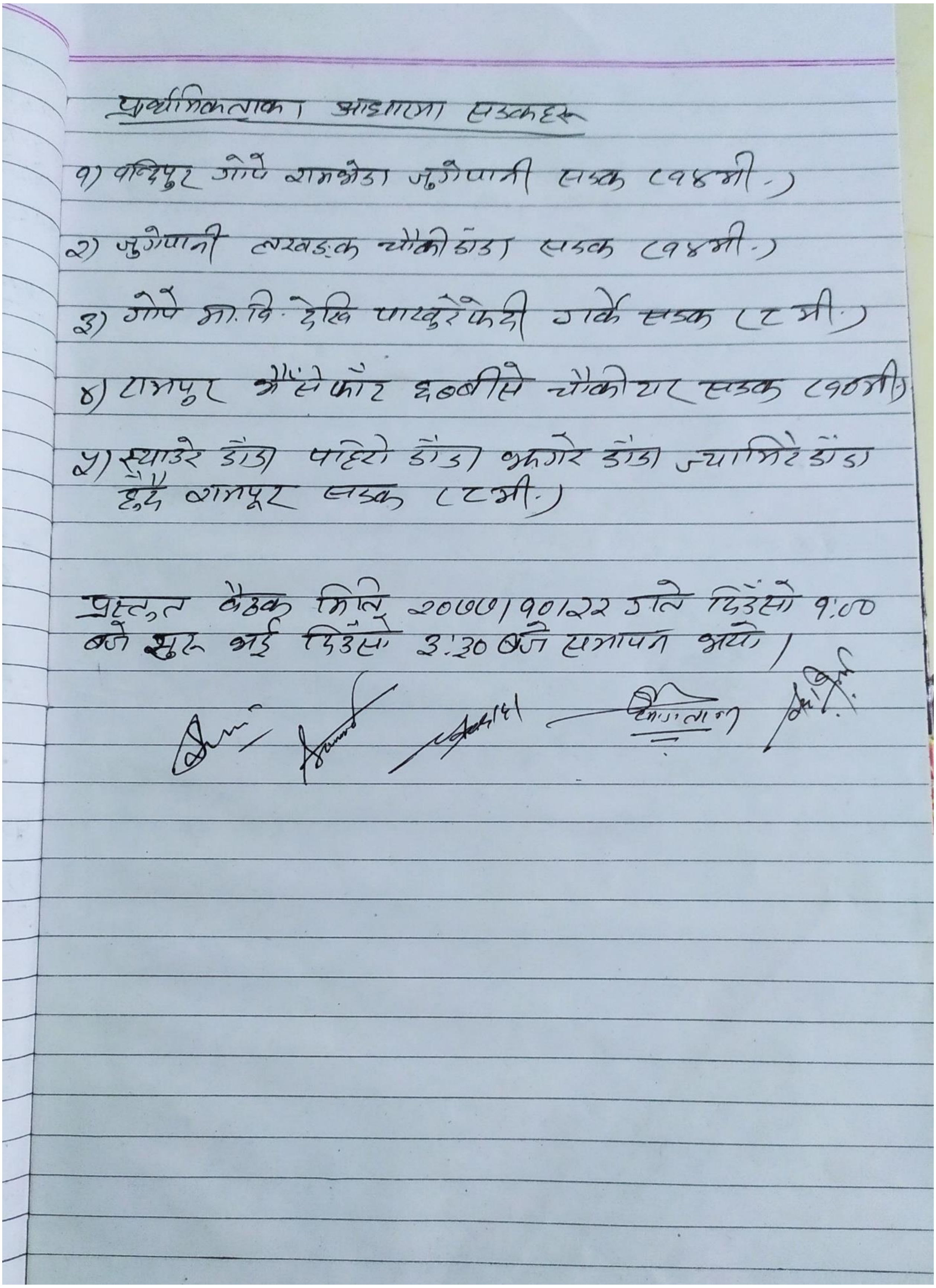
१) सडक वर्गीकरण गर्ने ।
२) ग्रामिण यातायात पुर्यायोजना अन्तर्गत सडक ग्रेड सम्बन्धि ।

निर्णयहरु

१) प्रस्ताव नं १ उपर छलफल गर्दा सडक क्षेत्राधिकार चौडाईका आधारमा सडक वर्ग कायम गरियो ।

२) प्रस्ताव नं २ उपर छलफल गर्दा घ्याङलेख गाउँपालिका वडा नं ४ का विद्यमान सडक स्तरोन्नति गर्नुपर्ने सडक तथा नयाँ सडक निर्माणको लागि सर्वसहमतिले तिम्नानुसारको सडक योजनाहरु प्राथमिकताका आधारमा तोकेको निर्णय गरियो ।

Figure 35: Minuting Record of Meeting at the Ward 04


प्राथमिकताका आधारमा सडकहरू

१) चन्दिपुर गौपे रामझोडा जुगेपानी सडक (१४ मी.)

२) जुगेपानी लखडक चौकी डाँडा सडक (१४ मी.)

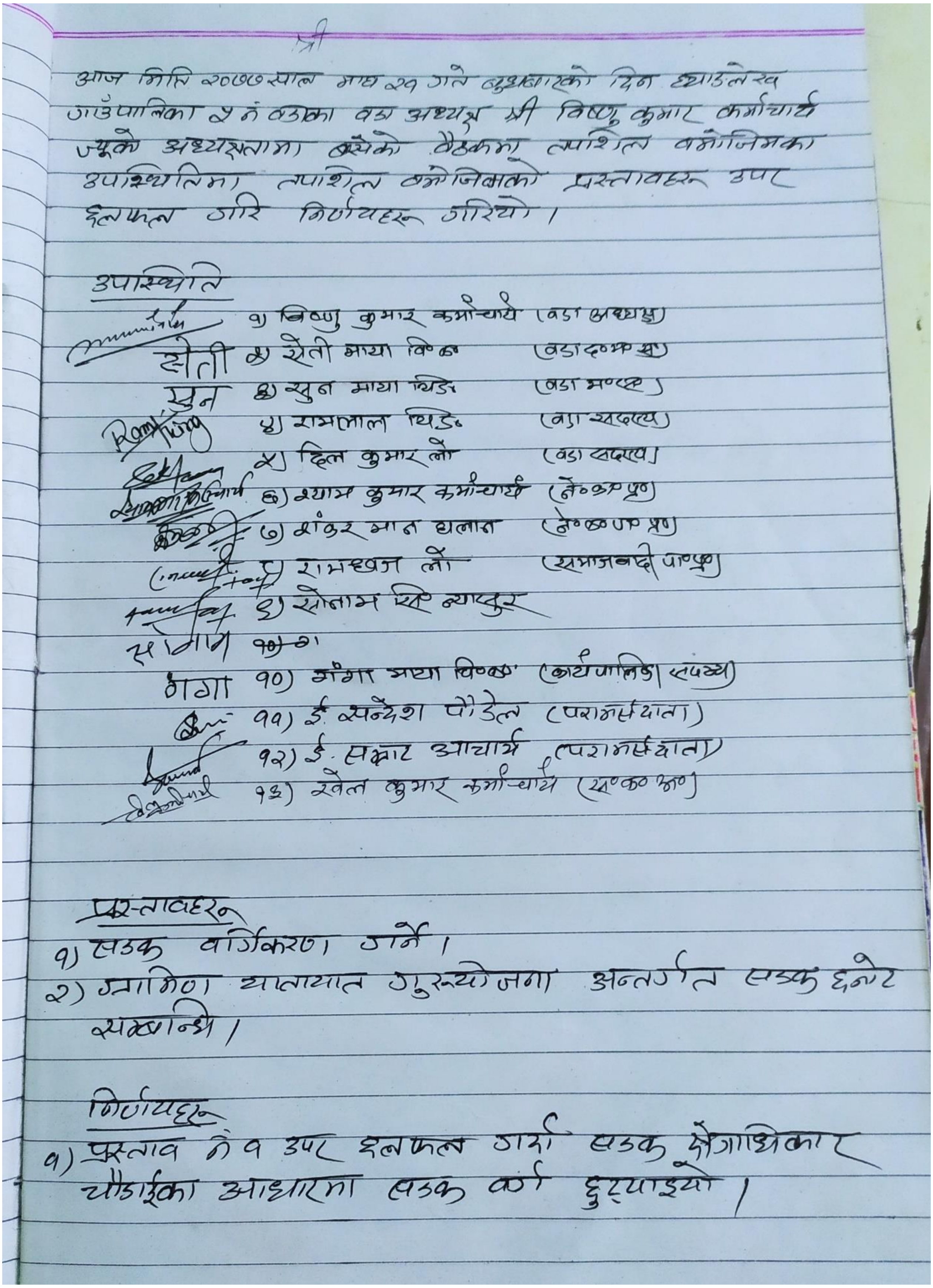
३) गौपे मा.वि. देखि पाखुरेफेदी गार्के सडक (८ मी.)

४) रामपुर भैंसेफाँट इज्जबीसे चौकीपार सडक (१० मी.)

५) स्याउरे डाँडा पाहिरो डाँडा ओगरे डाँडा ज्यामिरे डाँडा हुँदै रामपुर सडक (८ मी.)

प्रस्तुत बैठक मिति २०७७/१०/२२ गते दिउँसो १:०० बजे सुरु भई दिउँसो ३:३० बजे समापन भयो।

Figure 36: Minuting Record of Meeting at the Ward 04


श्री

आज मिति २०७७ साल माघ २७ गते बुधबारको दिन घ्याङलेख गाउँपालिका ५ नं वडाका वडा अध्यक्ष श्री विष्णु कुमार कर्माचार्य ज्यूको अध्यक्षतामा बसेको बैठकमा तपशिल बमोजिमका उपस्थितिमा तपशिल बमोजिमको प्रस्तावहरू उपर छलफल गरि निर्णयहरू गरियो।

उपस्थिति

१) विष्णु कुमार कर्माचार्य (वडा अध्यक्ष)
२) सेती माया विक (वडा सदस्य)
३) सुन माया थिङ (वडा सदस्य)
४) रामलाल थिङ (वडा सदस्य)
५) दिल कुमार लो (वडा सदस्य)
६) श्याम कुमार कर्माचार्य (ने.क.पा. प्र.)
७) शंकर मान घलान (ने.क.पा. प्र.)
८) रामध्वज लो (समाजवादी पा. प्र.)
९) सोनाम सिं ब्याम्बुर
१०) गंगा माया विक (कार्यपालिका सदस्य)
११) ई. सन्देश पौडेल (परामर्शदाता)
१२) ई. सकार आचार्य (परामर्शदाता)
१३) खेत कुमार कर्माचार्य (प्र.क.अ.)

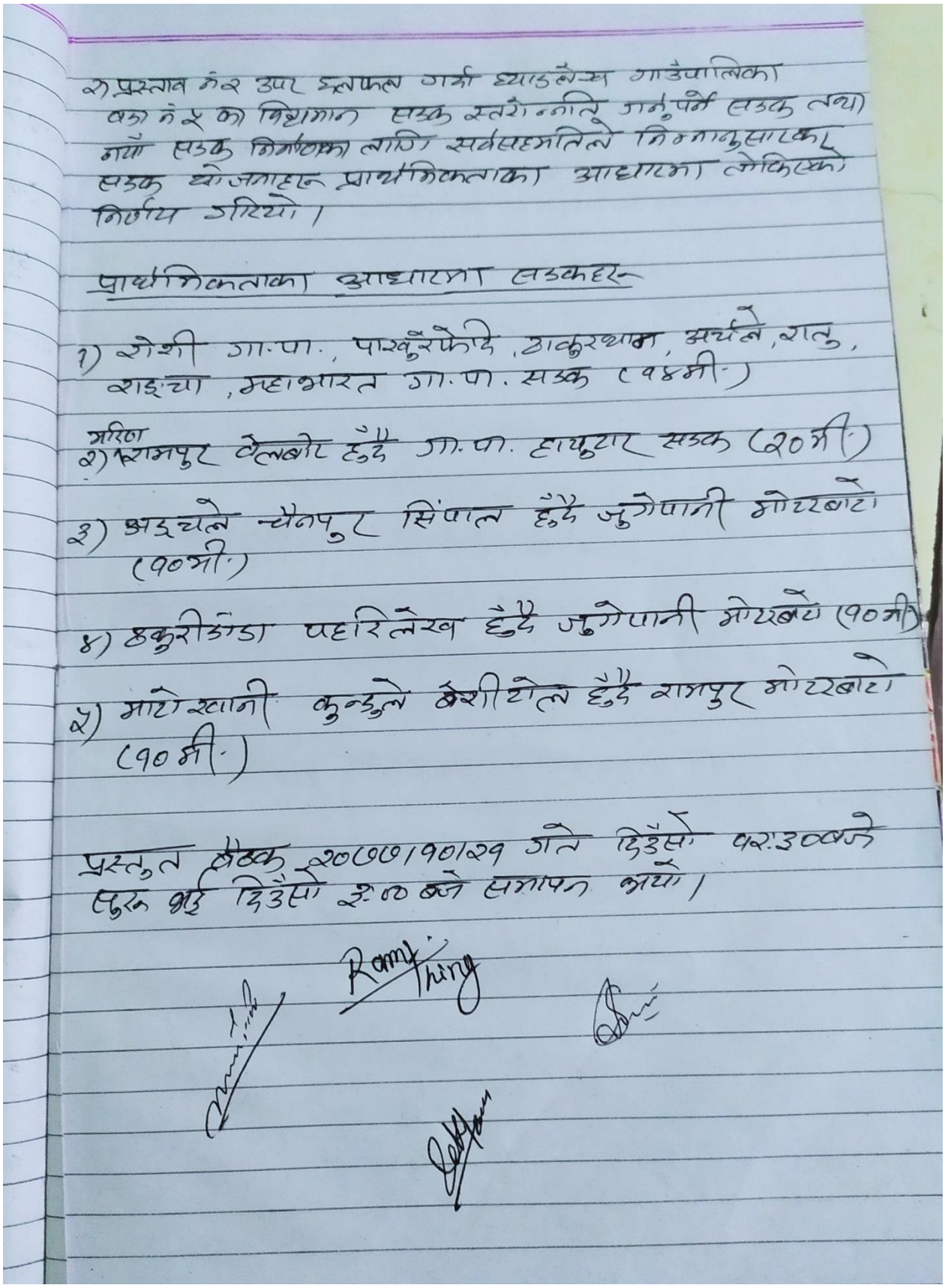
प्रस्तावहरू

१) सडक वर्गीकरण गर्ने।
२) ग्रामिण यातायात गुरुयोजना अन्तर्गत सडक छनौट सम्बन्धी।

निर्णयहरू

१) प्रस्ताव नं १ उपर छलफल गर्दा सडक भौगोलिक चौडाईका आधारमा सडक वर्ग छुट्याइयो।

Figure 37: Minuting Record of Meeting at the Ward 05



२) प्रस्ताव नं २ उपर छलफल गर्दा घ्याङलेक गाउँपालिका वडा नं २ का विद्यमान सडक स्तरोन्नति गर्नुपर्ने सडक तथा नयाँ सडक निर्माणका लागि सर्वसहमतिले निम्नानुसारका सडक योजनाहरु प्राथमिकताका आधारमा तोकिएको निर्णय गरियो ।

प्राथमिकताका आधारमा सडकहरु

१) रोशी गा.पा., पाखुरेफेदे, ठाकुरधारा, अर्चले, रातु, राइचा, महाभारत गा.पा. सडक (१४मी.)

२) रामपुर बेलबोट हुँदै गा.पा. हाचुवार सडक (२०मी.)

३) अड्चले चैनपुर सिंपाल हुँदै जुगेपानी मोटरबाटो (१०मी.)

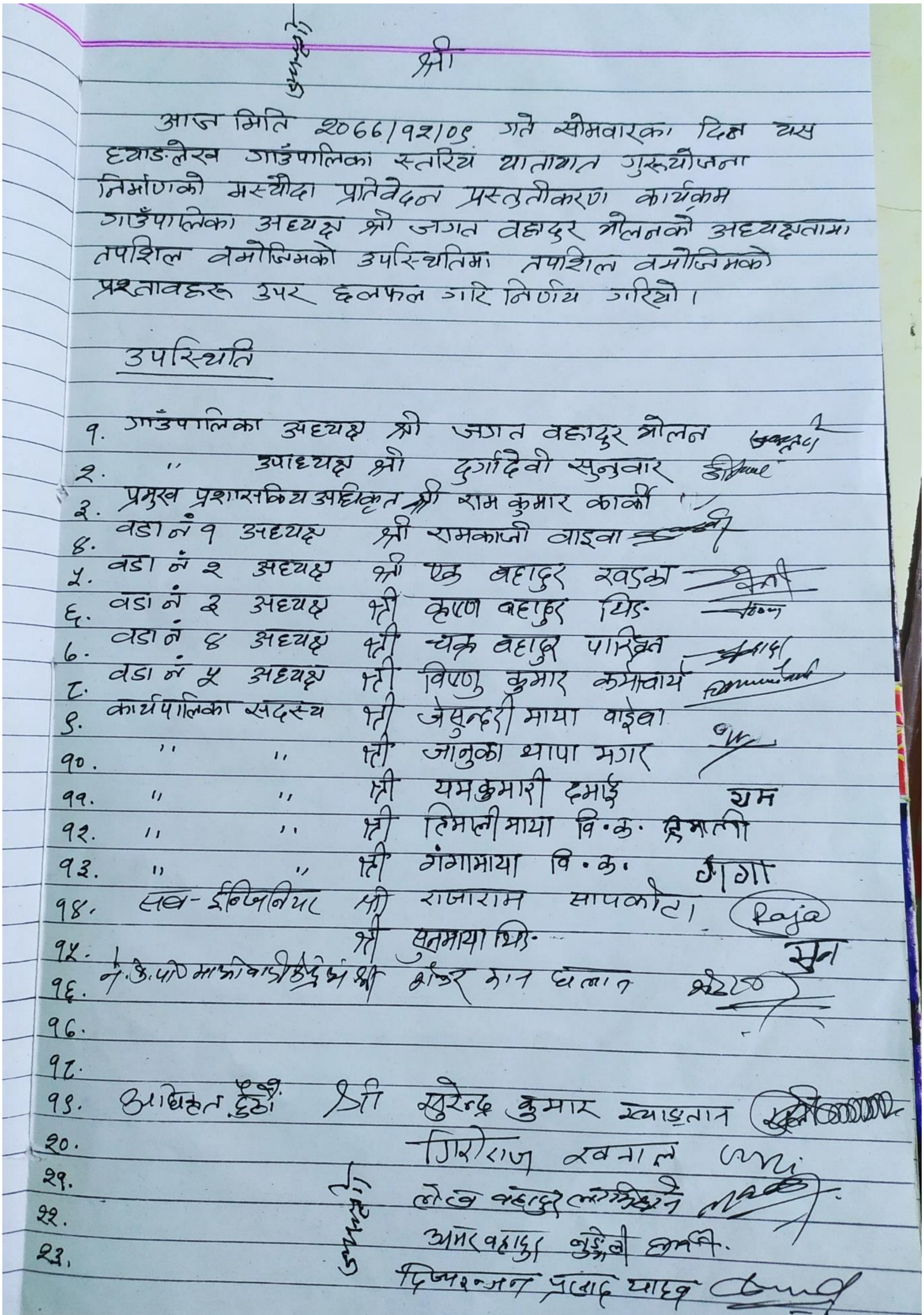
४) ठकुरीडाँडा पहरिलेख हुँदै जुगेपानी मोटरबाटो (१०मी.)

५) माटोखानी कुन्डुले बेसीटोल हुँदै रामपुर मोटरबाटो (१० मी.)

प्रस्तुत बैठक २०७७/१०/२१ गते दिउँसो १:३० बजे प्रारम्भ भई दिउँसो ३:०० बजे समापन भयो ।

Ramji Thing

Figure 38: Minuting Record of Meeting at the Ward 05



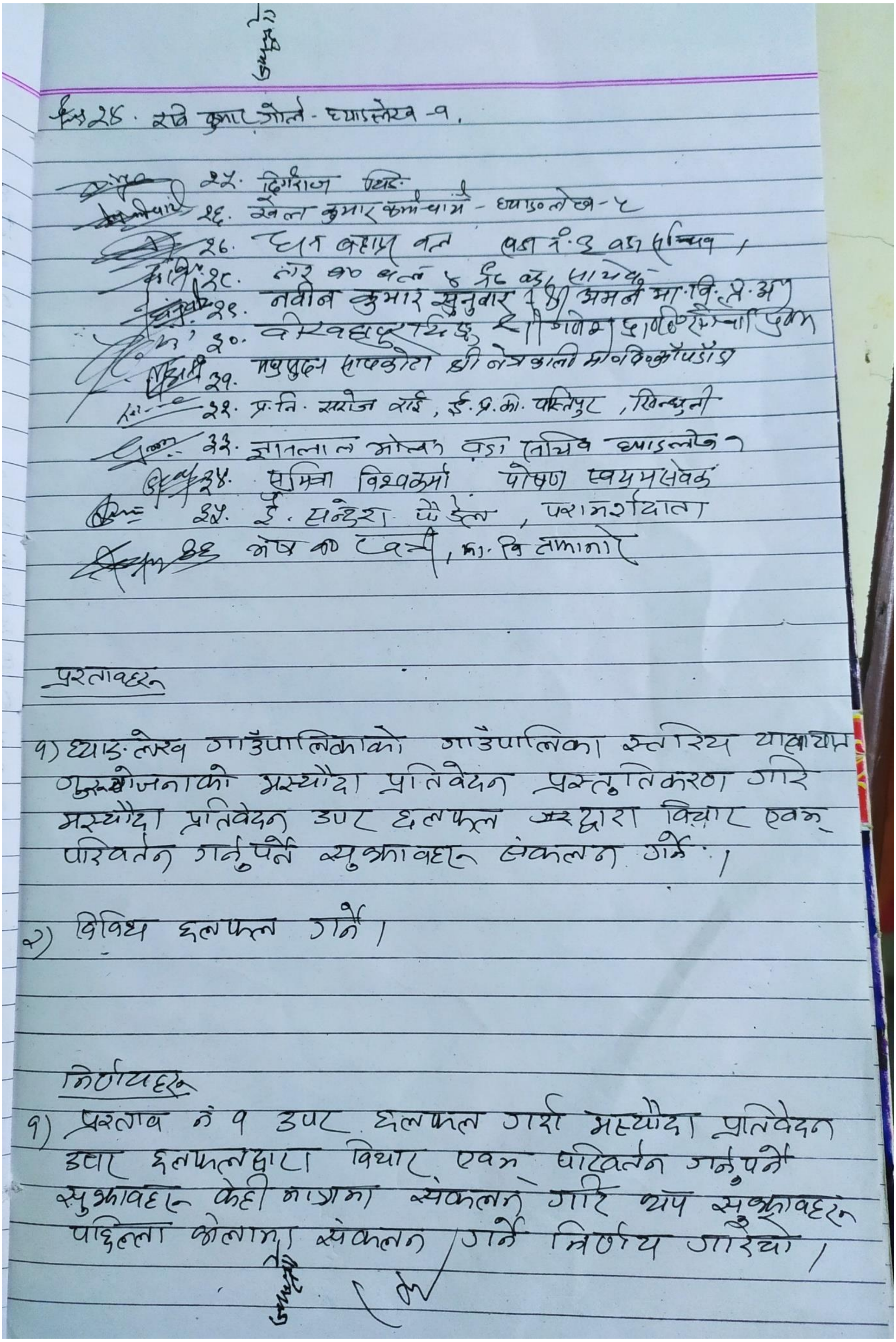
श्री

आज मिति २०७७/१२/०९ गते सोमवारका दिन यस घ्याङलेख गाउँपालिका स्तरियं यातायात गुरुयोजना निर्माणको मस्यौदा प्रतिवेदन प्रस्तुतीकरण कार्यक्रम गाउँपालिका अध्यक्ष श्री जगत बहादुर मोक्तानको अध्यक्षतामा तपशिल बमोजिमको उपस्थितिमा तपशिल बमोजिमको प्रस्तावहरू उपर छलफल गरि निर्णय गरियो।

उपस्थिति

१. गाउँपालिका अध्यक्ष श्री जगत बहादुर मोक्तान
२. " उपाध्यक्ष श्री दुर्गादेवी सुनुवार
३. प्रमुख प्रशासकिय अधिकृत श्री राम कुमार कार्की
४. वडा नं १ अध्यक्ष श्री रामकाजी वाइवा
५. वडा नं २ अध्यक्ष श्री एक बहादुर खड्का
६. वडा नं ३ अध्यक्ष श्री कृष्ण बहादुर थिङ
७. वडा नं ४ अध्यक्ष श्री चक्र बहादुर पारियार
८. वडा नं ५ अध्यक्ष श्री विष्णु कुमार कर्माचार्य
९. कार्यपालिका सदस्य श्री जेसुन्दरी माया वाइवा
१०. " " श्री जानुका थापा मगर
११. " " श्री यमकुमारी दमाई
१२. " " श्री हिमाली माया वि.क.
१३. " " श्री गंगामाया वि.क.
१४. सब-ईन्जिनियर श्री राजाराम सापकोटा
१५. श्री सुनमाया थिङ
१६. ने.क.पा माओवादी केन्द्र अ. श्री ओंकार नाथ घलान
१७.
१८.
१९. अधिकृत छैठौं श्री सुरेन्द्र कुमार स्याङतान
२०. गिरिराज खनाल
२१. लोक बहादुर लामिछाने
२२. अमर बहादुर कुइँकेल क्षेत्री
२३. दिव्यरञ्जन प्रसाद यादव

Figure 39: Minuting Record of Meeting at the RM Office



२४. रवि कुमार गौतम - घ्याङलेख -१.

२५. डिगराज थिङ

२६. खेल कुमार कार्कीयाम - घ्याङलेख -५

२७. धन बहादुर बल वडा नं. ३ वडा सचिव,

२८. नर बहादुर बल ४ नं. वडा सचिव

२९. नवीन कुमार सुनुवार श्री अमर मा.वि. प्र.अ.

३०. वीरबहादुर थिङ श्री गणेश प्राथमिक विद्यालय

३१. मधुसुदन सापकोटा श्री नेत्रकाली मा.वि. खोपडाँडा

३२. प्र.नि. सरोज राई, ई.प्र.को. पत्तिपुर, सिन्धुली

३३. ज्ञानलाल मोक्तान वडा सचिव घ्याङलेख १

३४. सुमित्रा विश्वकर्मा पोषण स्वयमसेवक

३५. ई. सन्देश पौडेल, परामर्शदाता

३६ नेत्र बहादुर रेग्मी, का.वि. तामाङ

प्रस्तावहरू

१) घ्याङलेख गाउँपालिकाको गाउँपालिका स्तरिय यातायात गुरुयोजनाको मस्यौदा प्रतिवेदन प्रस्तुतिकरण गरि मस्यौदा प्रतिवेदन उपर छलफल सहद्वारा विचार एवम् परिवर्तन गर्नुपर्ने सुझावहरू संकलन गर्ने ।

२) विविध छलफल गर्ने ।

निर्णयहरू

१) प्रस्ताव नं १ उपर छलफल गर्दा मस्यौदा प्रतिवेदन उपर छलफलद्वारा विचार एवम् परिवर्तन गर्नुपर्ने सुझावहरू केही मात्रमा संकलन गरि थप सुझावहरू पछिल्ला बेलामा संकलन गर्ने निर्णय गरियो ।

Figure 40: Minuting Record of Meeting at the RM Office

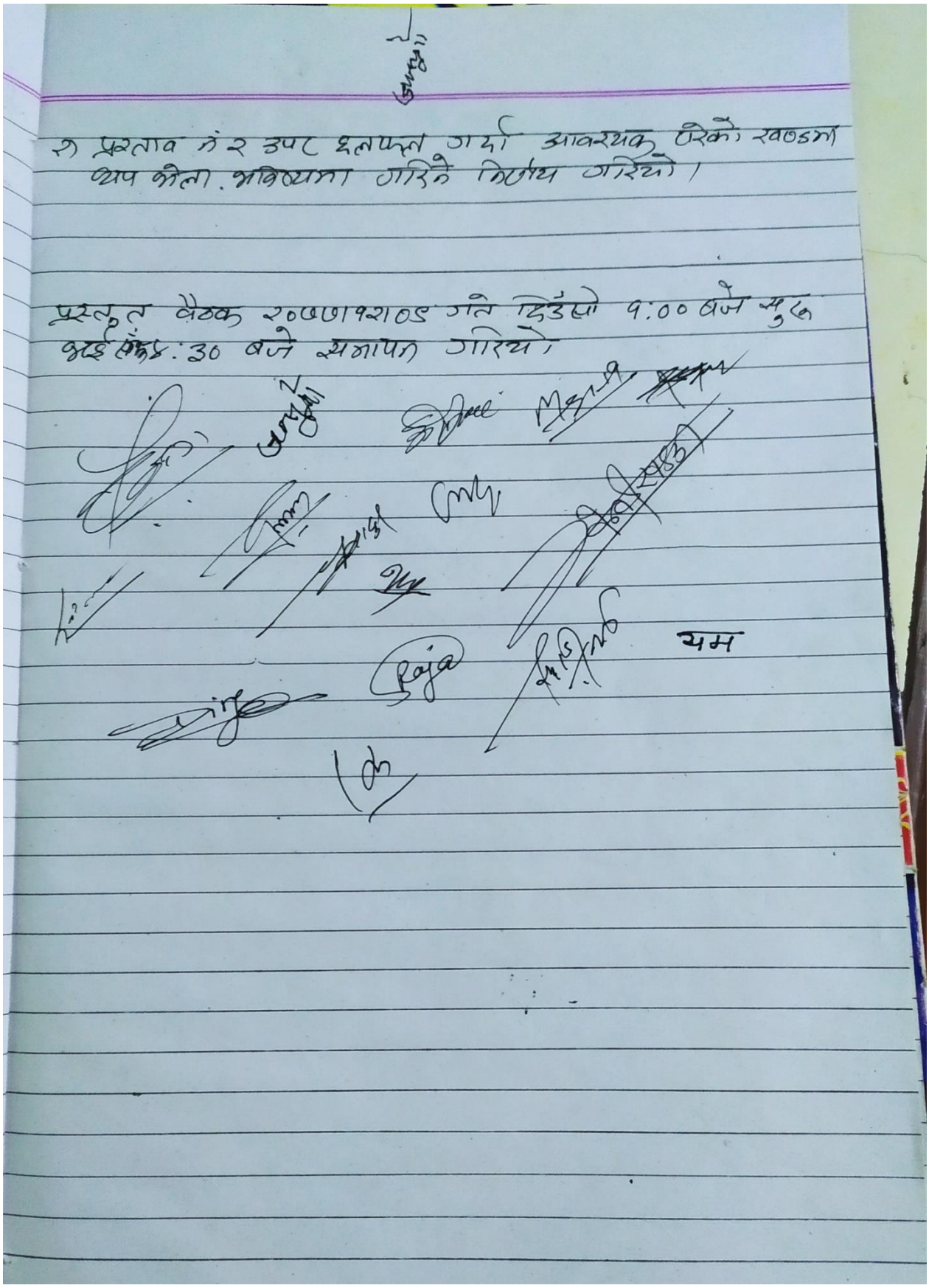
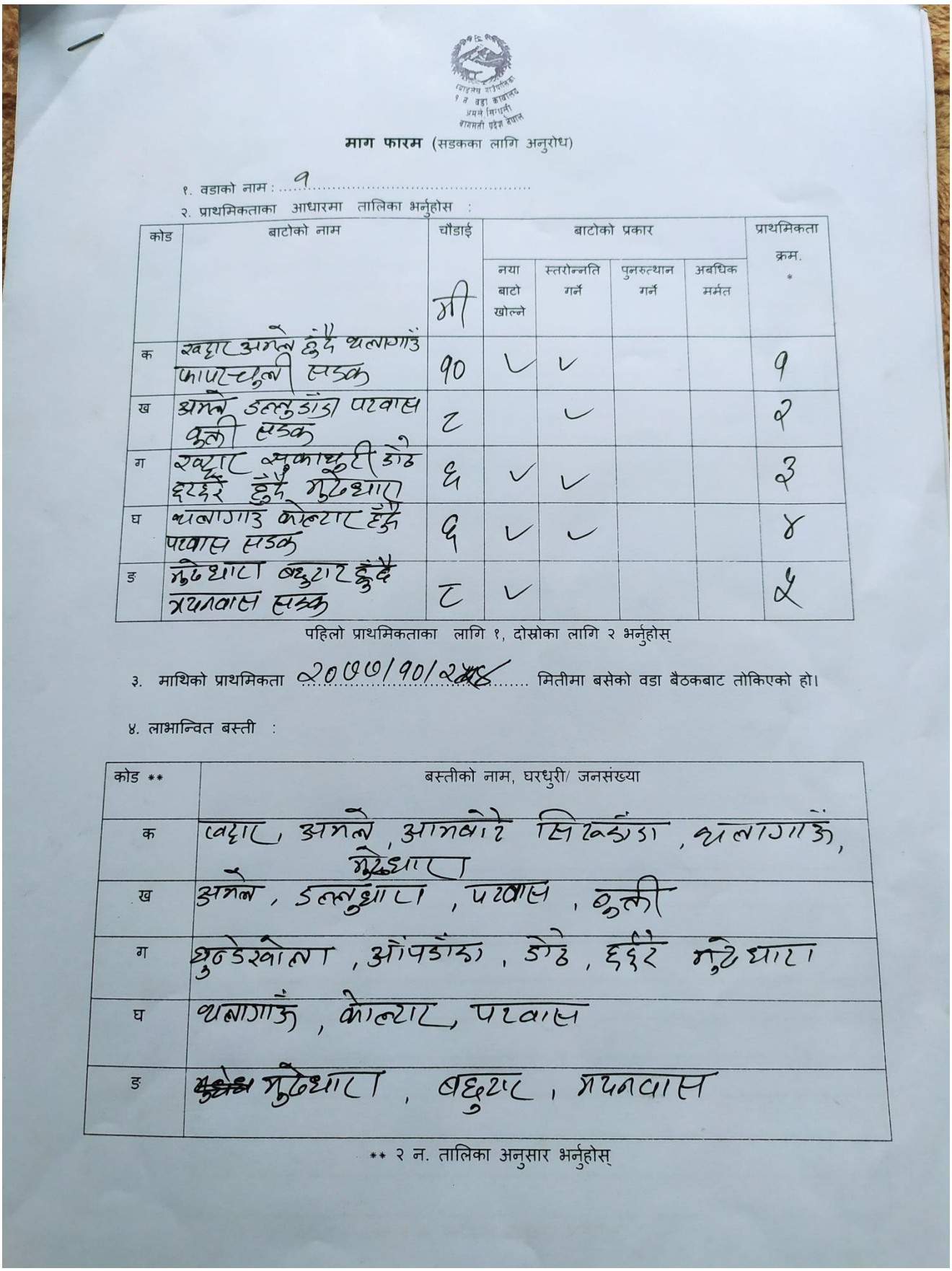


Figure 41: Minuting Record of Meeting at the RM Office

ANNEX-III: Demand Forms



माग फारम (सडकका लागि अनुरोध)

१. वडाको नम : ९

२. प्राथमिकताका आधारमा तालिका भर्नुहोस :

कोड	बाटोको नाम	चौडाई मी	बाटोको प्रकार				प्राथमिकता क्रम. *
			नया बाटो खोल्ने	स्तरोन्नति गर्ने	पुनरुत्थान गर्ने	अवधिक मर्मत	
क	खदार अमले हुँदै थलागाउँ फापरचुली सडक	१०	✓	✓			१
ख	अमले डल्लुडाँडा पटवास कुली सडक	८		✓			२
ग	खदार सुकाचुटी डाँढे दर्दरे हुँदै गुठेधारा	६	✓	✓			३
घ	थलागाउ कोल्टार हुँदै पटवास सडक	६	✓	✓			४
ङ	गुठेधारा बढुवार हुँदै रयनवास सडक	८	✓				५

पहिलो प्राथमिकताका लागि १, दोस्रोका लागि २ भर्नुहोस्

३. माथिको प्राथमिकता २०७७/१०/२४ मितीमा बसेको वडा बैठकबाट तोकिएको हो।

४. लाभान्वित बस्ती :

कोड **	बस्तीको नाम, घरधुरी/ जनसंख्या
क	खदार, अमले, आमबोटे सिरुडाँडा, थलागाउँ, गुठेधारा
ख	अमले, डल्लुधारा, पटवास, कुली
ग	घुडेखोला, ओपडाँडा, डाँढे, दर्दरे गुठेधारा
घ	थलागाउँ, कोल्टार, पटवास
ङ	~~गुठेधारा~~ गुठेधारा, बढुवार, रयनवास

** २ न. तालिका अनुसार भर्नुहोस्

७. वडामा अन्य विकासको योजना : (यातायात क्षेत्र बाहेक अन्य बिकाशको योजना भए उल्लेख गर्नुहोस)

क्रम संख्या	विकास योजनाको नाम	प्राथमिकता क्रम	कैफियत (स्थान ,महत्व , सहयोग, आदी)
१.			
२.			
३.			
४.			
५.			
६.			
७.			

८. प्रस्तावित बाटोको लागि वडाको भूमिका (उल्लेख गर्नुहोस):

क) वडाले निम्न किसिमले सहयोग गर्नेछ :

- नगद पैसा सहयोग (कति प्रतिशत उल्लेख गर्नुहोस:.....%
- श्रमदान (सिमांकन औल्याउनुस) कति सम्म रू.....
- जग्गा जमिन (सडक अधिकार क्षेत्रमा पर्ने).....
- कामको लागि खाना/खाजा.....
- मर्मत सम्हार.....
- अन्य (उल्लेख गर्नुहोस).....

.....

ख) माथी लेखिएको विवरण सहि छ। 2079/9/24 मितिमा बसेको वडा बैठकले माथि उल्लेखित विवरण सबै छलफलबाट पारित गरिएको घोसणा गर्दछ । एक प्रतिलिपि वडा कार्यालयमा रेकर्डको लागि राखिएको छ।

.....

वडा संयोजकको हस्ताक्षर

(नाम: रामकाजी वाइबा)

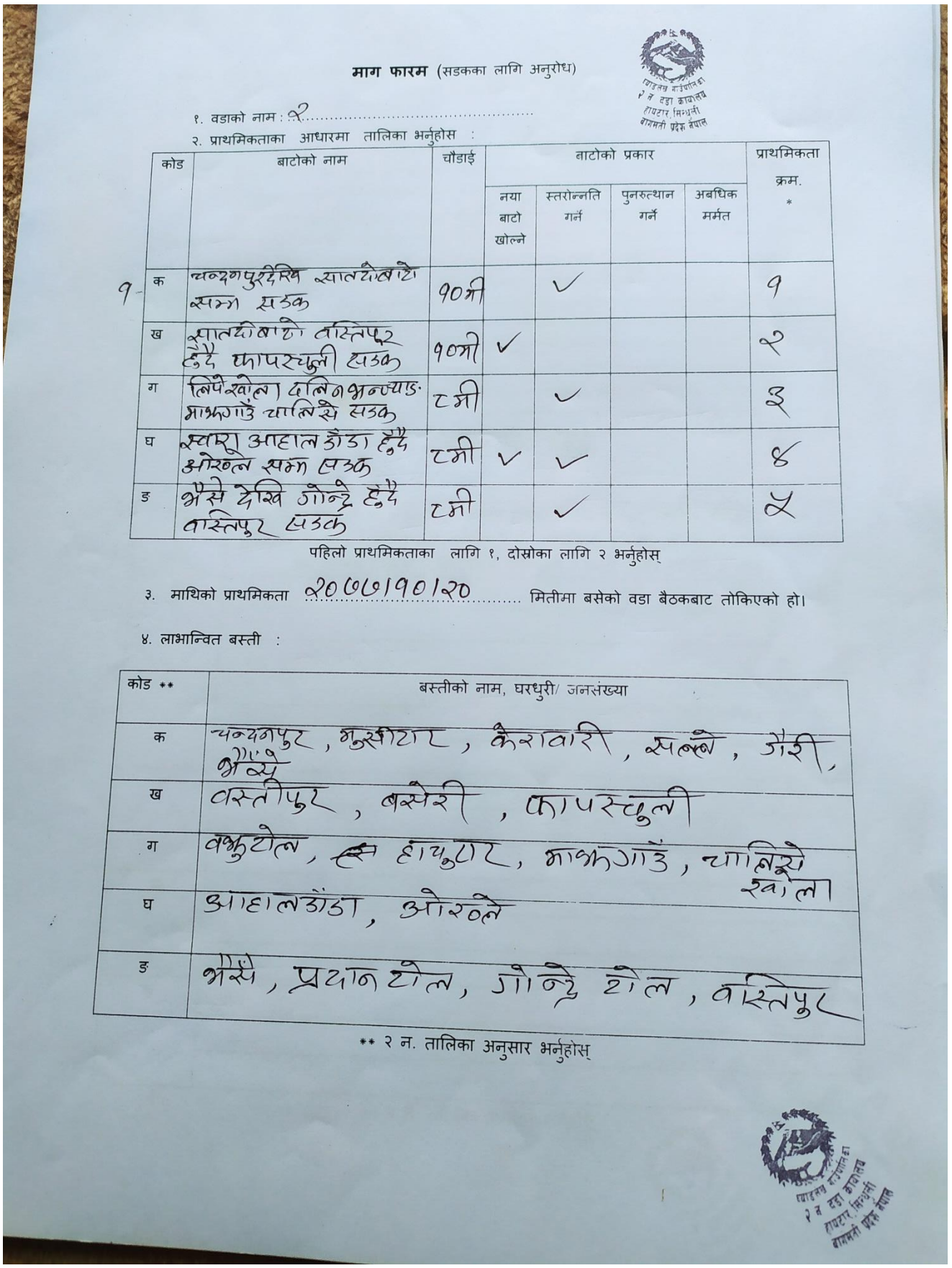
मिति : 2079/9/24

.....

वडा सचिवको हस्ताक्षर

(नाम: ज्ञानलाल भोलन)

मिति : 2079/9/24



माग फारम (सडकका लागि अनुरोध)

१. वडाको नाम : २

२. प्राथमिकताका आधारमा तालिका भर्नुहोस :

कोड	बाटोको नाम	चौडाई	बाटोको प्रकार				प्राथमिकता क्रम. *
			नया बाटो खोल्ने	स्तरोन्नति गर्ने	पुनरुत्थान गर्ने	अबधिक मर्मत	
१ क	चन्दनपुरदेखि सातदोबाटो सम्म सडक	१०मी		✓			१
ख	सातदोबाटो वस्तिपुर हुँदै फापरचुली सडक	१०मी	✓				२
ग	लिपैखोला दलिनअन्याङ माझगाउँ चालिसे सडक	८मी		✓			३
घ	स्वारु आहालडाँडा हुँदै ओरछले सम्म सडक	८मी	✓	✓			४
ङ	भैसे देखि जोन्चे हुँदै वस्तिपुर सडक	८मी		✓			५

पहिलो प्राथमिकताका लागि १, दोस्रोका लागि २ भर्नुहोस्

३. माथिको प्राथमिकता २०७७/१०/२० मितीमा बसेको वडा बैठकबाट तोकिएको हो।

४. लाभान्वित बस्ती :

कोड **	बस्तीको नाम, घरधुरी/ जनसंख्या
क	चन्दनपुर, मुनसोटार, केसावारी, सल्ले, जोरी, भैंसे
ख	वस्तीपुर, बस्नेरी, फापरचुली
ग	वक्कुटोल, हाचुटार, माझगाउँ, चालिसे खोला
घ	आहालडाँडा, ओरछले
ङ	भैसे, प्रधानटोल, जोन्चे टोल, वस्तिपुर

** २ न. तालिका अनुसार भर्नुहोस्

७. वडामा अन्य विकासको योजना : (यातायात क्षेत्र बाहेक अन्य बिकाशको योजना भए उल्लेख गर्नुहोस)

क्रम संख्या	विकास योजनाको नाम	प्राथमिकता क्रम	कैफियत (स्थान ,महत्व , सहयोग, आदी)
१.			
२.			
३.			
४.			
५.			
६.			
७.			

८. प्रस्तावित बाटोको लागि वडाको भूमिका (उल्लेख गर्नुहोस):

क) वडाले निम्न किसिमले सहयोग गर्नेछ :

- नगद पैसा सहयोग (कति प्रतिशत उल्लेख गर्नुहोस:.....%
- श्रमदान (सिमांकन औल्याउनुस) कति सम्म रू.....
- जग्गा जमिन (सडक अधिकार क्षेत्रमा पर्ने).....
- कामको लागि खाना/खाजा.....
- मर्मत सम्हार.....
- अन्य (उल्लेख गर्नुहोस).....

.....

ख) माथी लेखिएको विवरण सहि छ। २०७७/१०/२० मितिमा बसेको वडा बैठकले माथि उल्लेखित विवरण सबै छलफलबाट पारित गरिएको घोसणा गर्दछ । एक प्रतिलिपि वडा कार्यालयमा रेकर्डको लागि राखिएको छ।

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वडा संयोजकको हस्ताक्षर

(नाम: एक बहादुर खड्का)

मिति : २०७७/१०/२०

.....

Ward Secretary

वडा सचिवको हस्ताक्षर

(नाम: पुष्पराज कुवर)

मिति : २०७७/१०/२०

घ्याङलेख गाउपालिका
२ न वडा कार्यालय
हापटार, सिन्धुली
बागमती प्रदेश, नेपाल

माग फारम (सडकका लागि अनुरोध)

१. वडाको नाम ३

२. प्राथमिकताका आधारमा तालिका भर्नुहोस :

कोड	बाटोको नाम	चौडाई (मी)	बाटोको प्रकार: नया बाटो खोल्ने	स्तरोन्नति गर्ने	पुनरुत्थान गर्ने	अबधिक मर्मत	प्राथमिकता क्रम *
क	तामाजोर जोगडाँडा भन्ज्याङ सडक	८		✓			१
ख	सोलाभन्ज्याङ चिलाउने पाँचघरे लप्से हुँदै सातघावारा सडक	१०	✓	✓			२
ग	तामाजोर अधेरी खोल्सीदेखि केउराघारी हुँदै पाँचघरे डुङ्गे सम्म सडक	६		✓			३
घ	नेत्रकाली मा.वि. तल्कुडाँडा बाघमारा हुँदै छडेम आल्कोट सडक	६		✓			४
ङ	लप्से मगरडाँडा हुँदै मझुवा थान जाने सडक	६	✓	✓			५

पहिलो प्राथमिकताका लागि १, दोस्रोका लागि २ भर्नुहोस्

३. माथिको प्राथमिकता २०७७/१०/२३ मितीमा बसेको वडा बैठकबाट तोकिएको हो।

४. लाभान्वित बस्ती :

कोड **	बस्तीको नाम, घरधुरी/ जनसंख्या
क	तामाजोर, टेकानपुर, लसेडाँडा, आधामारा, जोगडाँडा
ख	बाँकोडाँडा, मूलडाँडा, चिलाउने, धीसिङ डाँडा, पचभैया, तिनघरे, डुङ्गे, रखन, लप्से, सातघरे
ग	अधेरी खोल्सी, केउराघारी, ठाकुरथान, पाँचघरे, डुङ्गे
घ	तामाजोर, जोगिनीटार, तल्कुडाँडा, बाघमारा, छडेम, आल्कोट
ङ	लप्से, मझुवा, मगरडाँडा

** २ न. तालिका अनुसार भर्नुहोस्

७. वडामा अन्य विकासको योजना : (यातायात क्षेत्र बाहेक अन्य बिकाशको योजना भए उल्लेख गर्नुहोस)

क्रम संख्या	विकास योजनाको नाम	प्राथमिकता क्रम	कैफियत (स्थान ,महत्व , सहयोग, आदी)
१.			
२.			
३.			
४.			
५.			
६.			
७.			

८. प्रस्तावित बाटोको लागि वडाको भूमिका (उल्लेख गर्नुहोस):

क) वडाले निम्न किसिमले सहयोग गर्नेछ :

- नगद पैसा सहयोग (कति प्रतिशत उल्लेख गर्नुहोस:.....%
- श्रमदान (सिमांकन औल्याउनुस) कति सम्म रू.....
- जग्गा जमिन (सडक अधिकार क्षेत्रमा पर्ने).....
- कामको लागि खाना/खाजा.....
- मर्मत सम्हार.....
- अन्य (उल्लेख गर्नुहोस).....

.....

ख) माथी लेखिएको विवरण सहि छ। २०७७/१०/२३ मितिमा बसेको वडा बैठकले माथि उल्लेखित विवरण सबै छलफलबाट पारित गरिएको घोसणा गर्दछ । एक प्रतिलिपि वडा कार्यालयमा रेकर्डको लागि राखिएको छ।

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वडा संयोजकको हस्ताक्षर

(नाम: कृष्ण बहादुर थिङ)

मिति : २०७७/१०/२३

ध्याङलेख गाउँपालिका
३ नं वडा कार्यालय
तामाङोर, सिन्धुली
बागमती प्रदेश, नेपाल

.....

वडा सचिवको हस्ताक्षर

(नाम: धन बहादुर बल)

मिति : २०७७/१०/२३

माग फारम (सडकका लागि अनुरोध)

१. वडाको नाम : ४

२. प्राथमिकताका आधारमा तालिका भर्नुहोस :

कोड	बाटोको नाम	चौडाई (मी)	बाटोको प्रकार				प्राथमिकता क्रम. *
			नया बाटो खोल्ने	स्तरोन्नति गर्ने	पुनरुत्थान गर्ने	अबधिक मर्मत	
क	वन्दिपुर गोपे रामभोडा जुगेपानी सडक	१४	✓	✓			१
ख	जुगेपानी लरवङक चौकीडाँडा सडक	१४		✓			२
ग	गोपे मा.वि. देखि पारकुरेफेदी जांकें सडक	८		✓			३
घ	रामपुर औंसेफांट दब्बीसे चौकीधार सडक	१०	✓	✓			४
ङ	स्याउरे डाँडा पहिरो डाँडा झगेरे डाँडा ज्यामिरे डाँडा हुँदै रामपुर सडक	८		✓			५

* पहिलो प्राथमिकताका लागि १, दोस्रोका लागि २ भर्नुहोस्

३. माथिको प्राथमिकता २०७७/१०/२२ .... मितीमा बसेको वडा बैठकबाट तोकिएको हो।

४. लाभान्वित बस्ती :

कोड **	बस्तीको नाम, घरधुरी/ जनसंख्या
क	वन्दिपुर, गोपे, रामभोडा, जुगेपानी
ख	ग्याङलेख ३, ४ समस्त
ग	गोपे, पारखुरीफेदी, दारईवा टोल
घ	रामपुर, मधानी, कालीखोला, दब्बीसे, मैनधार, नरकोट, बोक्से
ङ	स्याउरे डाँडा, पहिरो डाँडा, झगेरे डाँडा, ज्यामिरे डाँडा, सुब्बा डाँडा, रामपुर

** २ न. तालिका अनुसार भर्नुहोस्

७. वडामा अन्य विकासको योजना : (यातायात क्षेत्र बाहेक अन्य बिकाशको योजना भए उल्लेख गर्नुहोस)

क्रम संख्या	विकास योजनाको नाम	प्राथमिकता क्रम	कैफियत (स्थान ,महत्व , सहयोग, आदी)
१.			
२.			
३.			
४.			
५.			
६.			
७.			

८. प्रस्तावित बाटोको लागि वडाको भूमिका (उल्लेख गर्नुहोस):

क) वडाले निम्न किसिमले सहयोग गर्नेछ :

- नगद पैसा सहयोग (कति प्रतिशत उल्लेख गर्नुहोस:.....%
- श्रमदान (सिमांकन औल्याउनुस) कति सम्म रू.....
- जग्गा जमिन (सडक अधिकार क्षेत्रमा पर्ने).....
- कामको लागि खाना/खाजा.....
- मर्मत सम्हार.....
- अन्य (उल्लेख गर्नुहोस).....

.....

ख) माथी लेखिएको विवरण सहि छ। २०७७/१०/२२ मितिमा बसेको वडा बैठकले माथि उल्लेखित विवरण सबै छलफलबाट पारित गरिएको घोसणा गर्दछ । एक प्रतिलिपि वडा कार्यालयमा रेकर्डको लागि राखिएको छ।

.....

वडा संयोजकको हस्ताक्षर

(नाम: चक्रबहादुर पाखीन)

मिति : २०७७/१०/२२

चक्र बहादुर पाखीन

वडा सचिवको हस्ताक्षर

(नाम: नरबहादुर बल)

मिति : २०७७/१०/२२

नरबहादुर बल
वडा सचिव

माग फारम (सडकका लागि अनुरोध)

१. वडाको नाम : ५

२. प्राथमिकताका आधारमा तालिका भर्नुहोस्

कोड	बाटोको नाम	चौडाई	बाटोको प्रकार				प्राथमिकता क्रम. *
			नया बाटो खोल्ने	स्तरोन्नति गर्ने	पुनरुत्थान गर्ने	अबधिक मर्मत	
क	शेशी गा.पा. पारकुरेफेदि, ठाकुरथान, अर्चले, रातु, रङ्खो, महाभारत गापा सडक	१४मी		✓			१
ख	मरिगा, रामपुर बेलबोट हुँदै जापा छायुटार सडक	२०मी		✓			२
ग	ठकुरीडाँडा पहरिलेख हुँदै जुगेपानी मोटरबाटो	१०मी		✓			४
घ	अड्चल चैनपुर सिंपाल हुँदै जुगेपानी मोटरबाटो	१०मी		✓			३
ङ	माटोरवानी कुन्डुले बेसी टोल हुँदै रामपुर मोटरबाटो	१० मी	✓				५

पहिलो प्राथमिकताका लागि १, दोस्रोका लागि २ भर्नुहोस्

३. माथिको प्राथमिकता २०७७/१०/२१ मितीमा बसेको वडा बैठकबाट तोकिएको हो।

४. लाभान्वित बस्ती :

कोड **	बस्तीको नाम, घरधुरी/ जनसंख्या
क	रामभेडा, पारकुरेफेदी, गाके, घैटुखोरा, पुरानो आडे, चाघेर, बशेरी, ठाकुरथान, अड्चले, शल्क हुँदै महाभारत गा.पा
ख	मधुवन, काली खोला, रामपुर, बेलबोट, चौकोटार, हुँदै, छायुटार
ग	ठाकुरथान, रामपुर डाँडा, लोटोल, पहरिलेख,
घ	अड्चले, डोठे, चैनपुर, सिंपाल, जुगेपानी
ङ	माटोरवानी, कामी टोल, कुन्डुले डाँडा, रामपुर बजार

** २ न. तालिका अनुसार भर्नुहोस्

७. वडामा अन्य विकासको योजना : (यातायात क्षेत्र बाहेक अन्य बिकाशको योजना भए उल्लेख गर्नुहोस)

क्रम संख्या	विकास योजनाको नाम	प्राथमिकता क्रम	कैफियत (स्थान ,महत्व , सहयोग, आदी)
१.			
२.			
३.			
४.			
५.			
६.			
७.			

८. प्रस्तावित बाटोको लागि वडाको भूमिका (उल्लेख गर्नुहोस):

क) वडाले निम्न किसिमले सहयोग गर्नेछ :

- नगद पैसा सहयोग (कति प्रतिशत उल्लेख गर्नुहोस:.....%
- श्रमदान (सिमांकन औल्याउनुस) कति सम्म रू.....
- जग्गा जमिन (सडक अधिकार क्षेत्रमा पर्ने).....
- कामको लागि खाना/खाजा.....
- मर्मत सम्हार.....
- अन्य (उल्लेख गर्नुहोस).....

.....

ख) माथी लेखिएको विवरण सहि छ। २०७७।१०।२९ मितिमा बसेको वडा बैठकले माथि उल्लेखित विवरण सबै छलफलबाट पारित गरिएको घोसणा गर्दछ । एक प्रतिलिपि वडा कार्यालयमा रेकर्डको लागि राखिएको छ।

.....

वडा संयोजकको हस्ताक्षर

(नाम: विष्णु कुमार कर्माचार्य)

मिति : २०७७।१०।२९

.....

वडा सचिवको हस्ताक्षर

(नाम: रोशन कुमार कर्माचार्य)

मिति : २०७७।१०।२९

ANNEX-IV: PHOTOGRAPHS

Orentation Program (Rural Municipality Office)

Orentation Program (Rural Municipality Office)

Ward Level Workshop (Ward 1)

Ward Level Workshop (Ward 3)

Ward Level Workshop (Ward 5)

Ward level Workshop (Ward 4)

Presentation of Draft Report at the Office of the Rural Municipal Executive

Presentation of Draft Report at the Office of the Rural Municipal Executive

Office of the Rural Municipal Executive

Concrete Pavement in front of the Bank

Road Condition

Road Condition

Road Condition

Road Condition

Current Condition of Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak in Hayutar


ज्याङलेख गाउँपालिका
४नं. वडा कार्यालय
नेत्रकाली सिन्धुली


५ नं. वडा कार्यालय

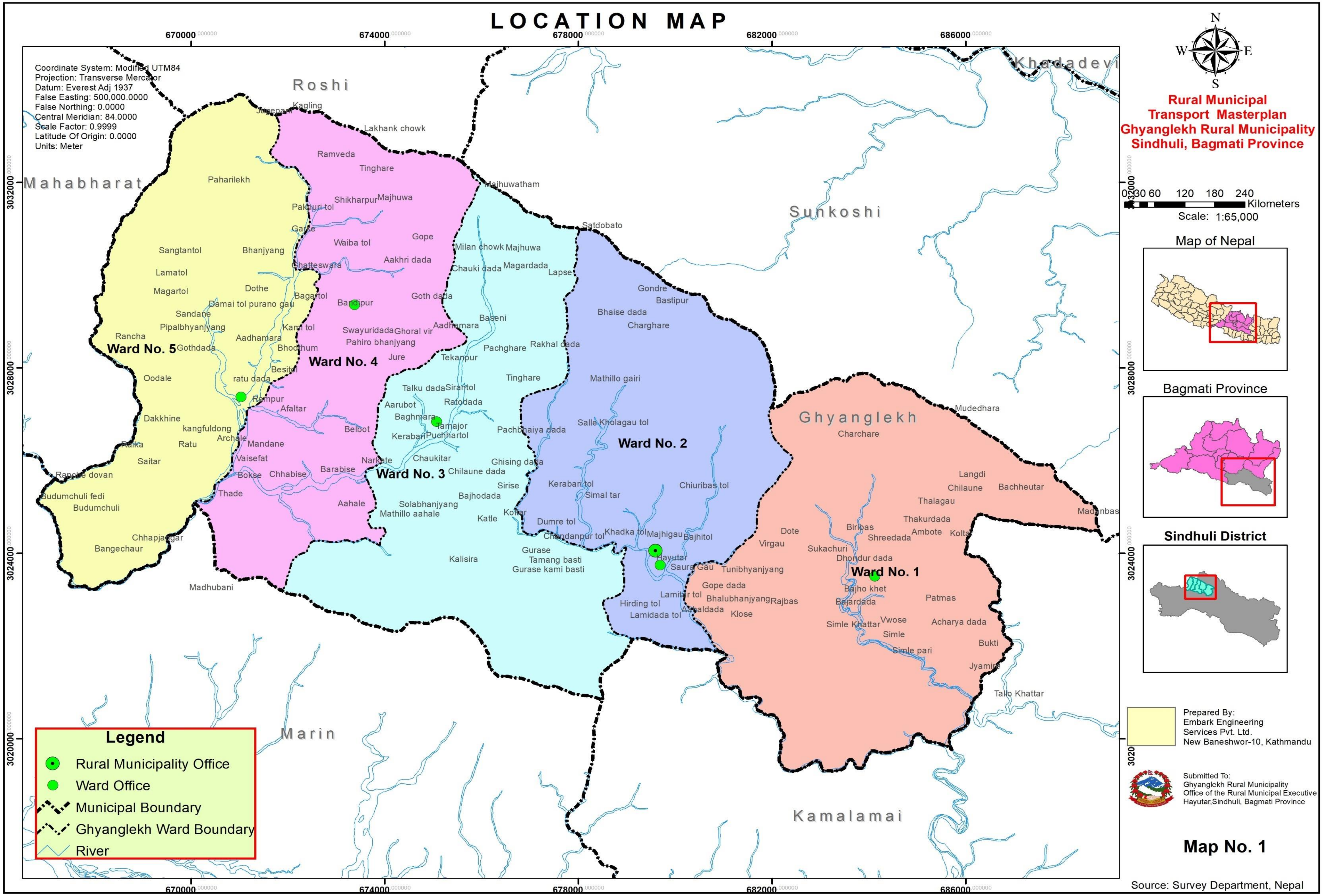
Bridge Underconstruction

Public Bus operating in Ghyanglekh

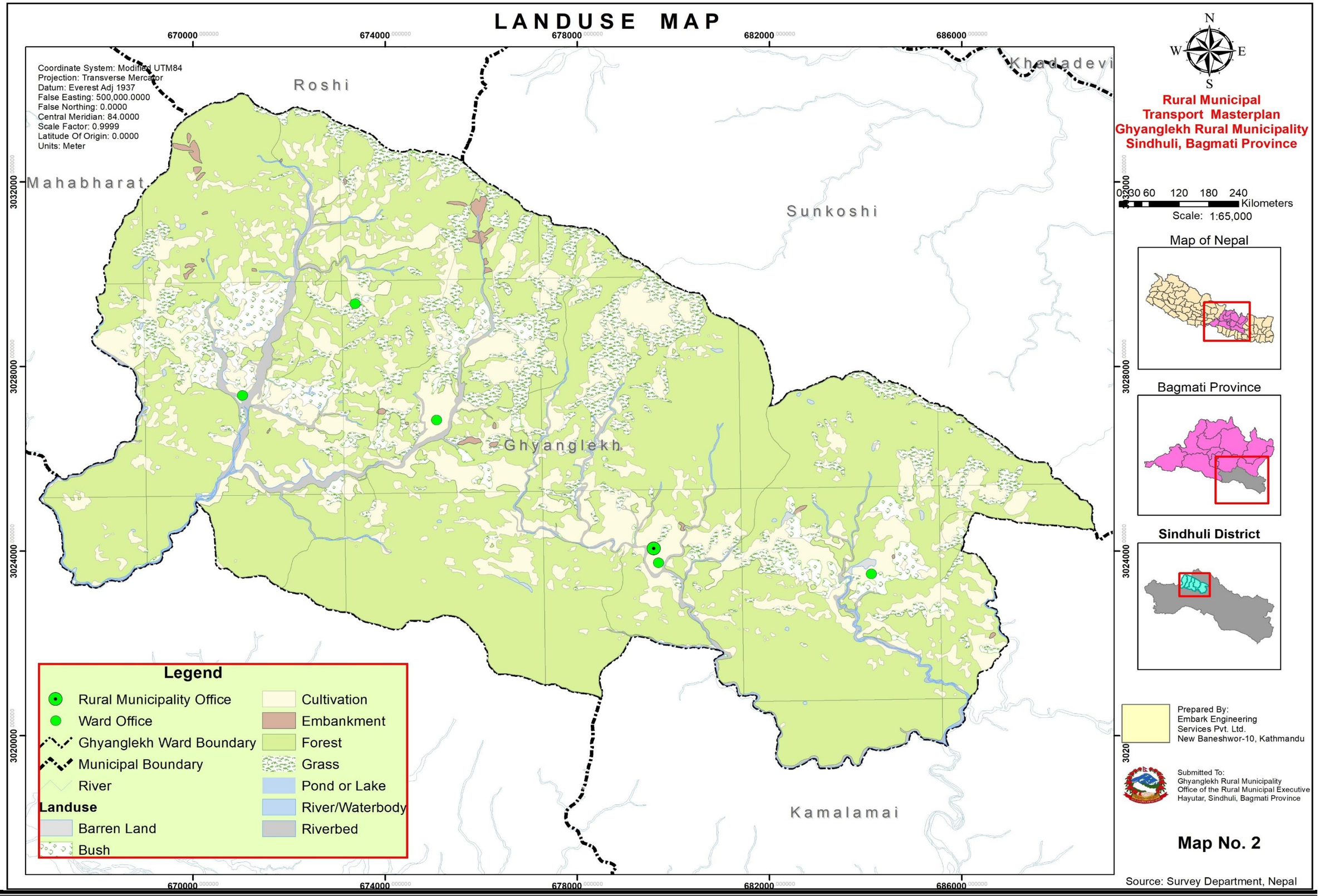
Public Vehicle operating from Kathmandu to Ghyanglekh

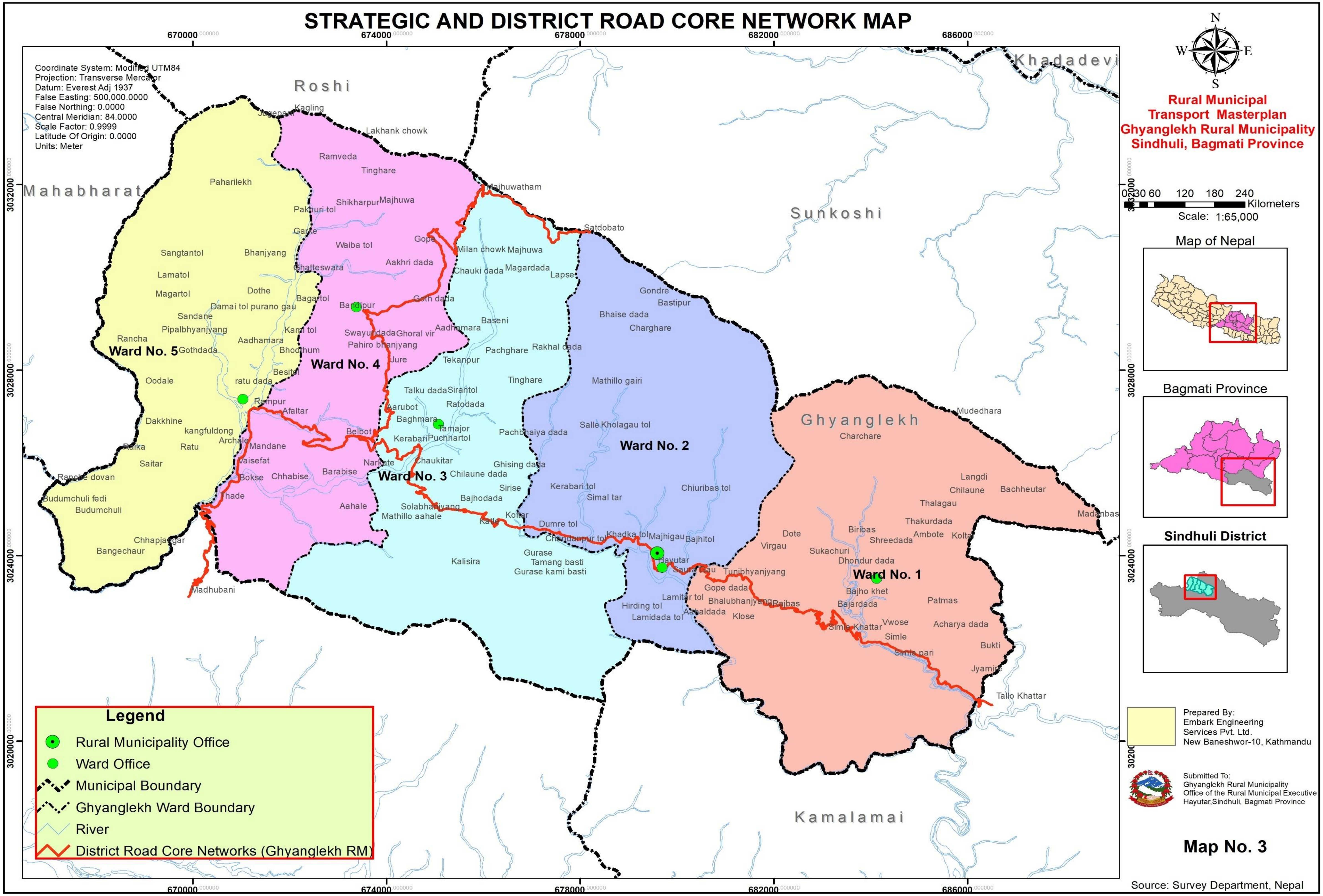
Public Vehicle operating from Kathmandu to Ghyanglekh

ANNEX-V: MAPS


LOCATION MAP
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
670000
674000
678000
682000
686000
3032000
3028000
3024000
3020000
Roshi
Mahabharat
Sunkoshi
Khadadevi
Ghyanglekh
Marin
Kamalamai
Ward No. 1
Ward No. 2
Ward No. 3
Ward No. 4
Ward No. 5
Rural Municipal
Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 30 60 120 180 240
Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Prepared By:
Embark Engineering
Services Pvt. Ltd.
New Baneshwor-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar,Sindhuli, Bagmati Province
Map No. 1
Source: Survey Department, Nepal

LANDUSE MAP


670000
674000
678000
682000
686000
3032000
3028000
3024000
3020000
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Roshi
Khadadevi
Mahabharat
Sunkoshi
Ghyanglekh
Kamalamai
Legend
Rural Municipality Office
Ward Office
Ghyanglekh Ward Boundary
Municipal Boundary
River
Landuse
Barren Land
Bush
Cultivation
Embankment
Forest
Grass
Pond or Lake
River/Waterbody
Riverbed
N
W
E
S
Rural Municipal
Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 30 60 120 180 240
Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Prepared By:
Embark Engineering
Services Pvt. Ltd.
New Baneshwor-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 2
Source: Survey Department, Nepal


STRATEGIC AND DISTRICT ROAD CORE NETWORK MAP
Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
District Road Core Networks (Ghyanglekh RM)
Ward No. 1
Ward No. 2
Ward No. 3
Ward No. 4
Ward No. 5
Map of Nepal
Bagmati Province
Sindhuli District
Scale: 1:65,000
Prepared By:
Embark Engineering Services Pvt. Ltd.
New Baneshwor-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar,Sindhuli, Bagmati Province
Map No. 3
Source: Survey Department, Nepal

INDICATIVE POTENTIAL DEVELOPEMENT MAP

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province

0 30 60 120 180 240 Kilometers
Scale: 1:65,000

Map of Nepal

Bagmati Province

Sindhuli District

Legend

- Rural Municipality Office
- Ward Office
- Ghyanglekh Ward Boundary
- Municipal Boundary
- Helipad
- Landfill site
- Sahid Smriti Football Ground
- Nepal SBI Bank
- School
- Health Post
- Police Office
- Red Cross
- Temple
- Tourist Area
- River

Road Class: A, B, C, D

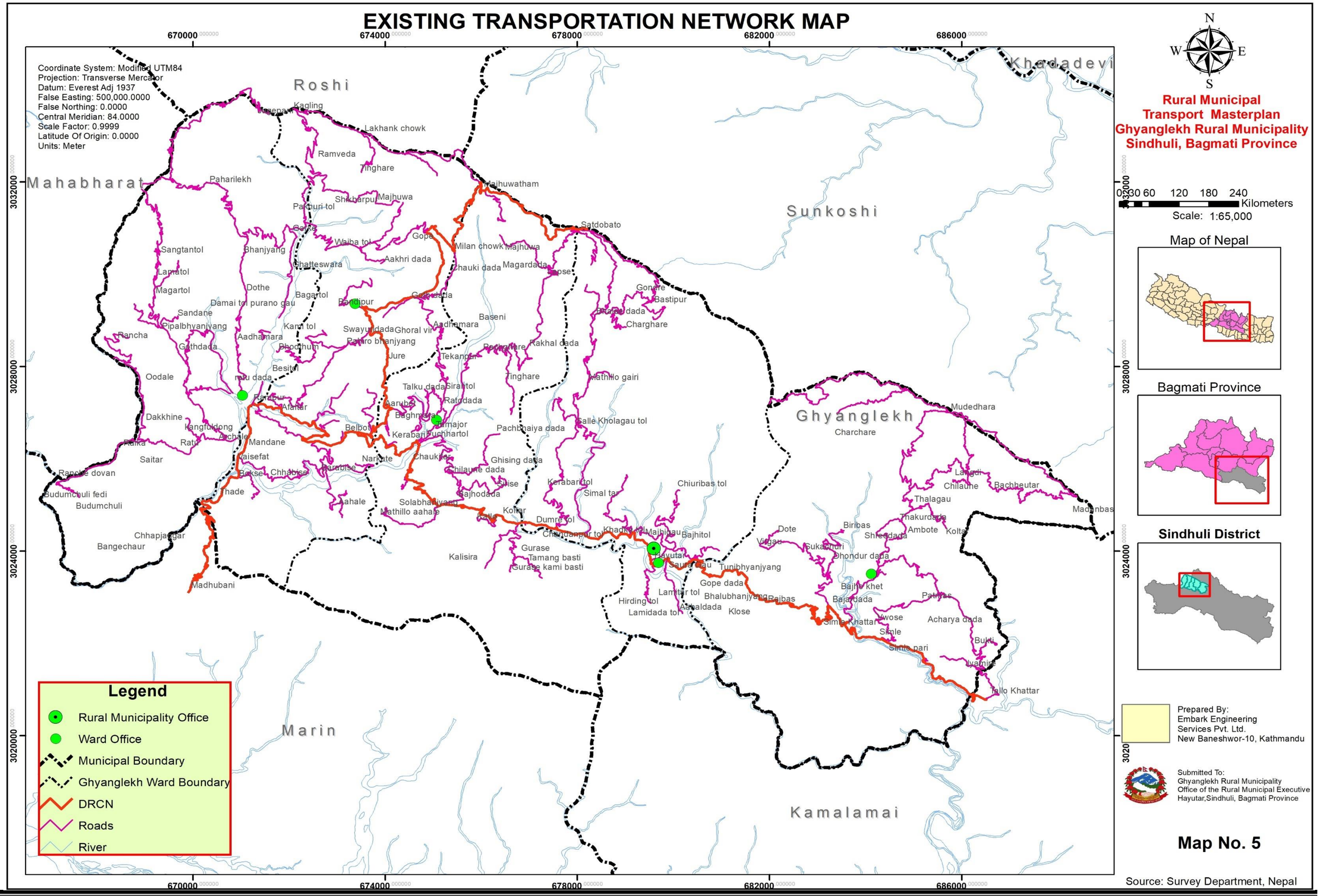
Prepared By:
Embark Engineering Services Pvt. Ltd.
New Baneshowr-10, Kathmandu

Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province

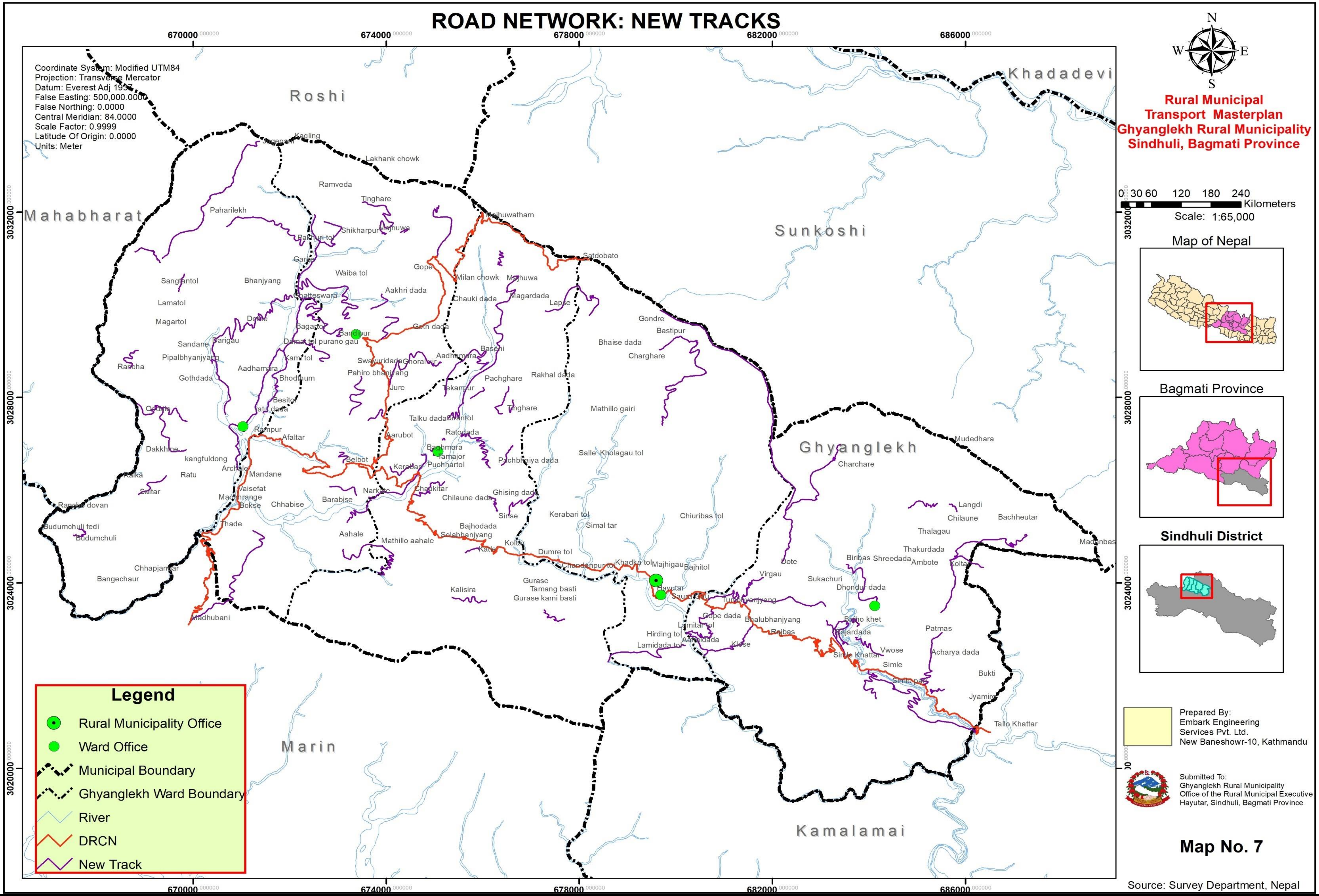
Map No. 4

Source: Survey Department, Nepal

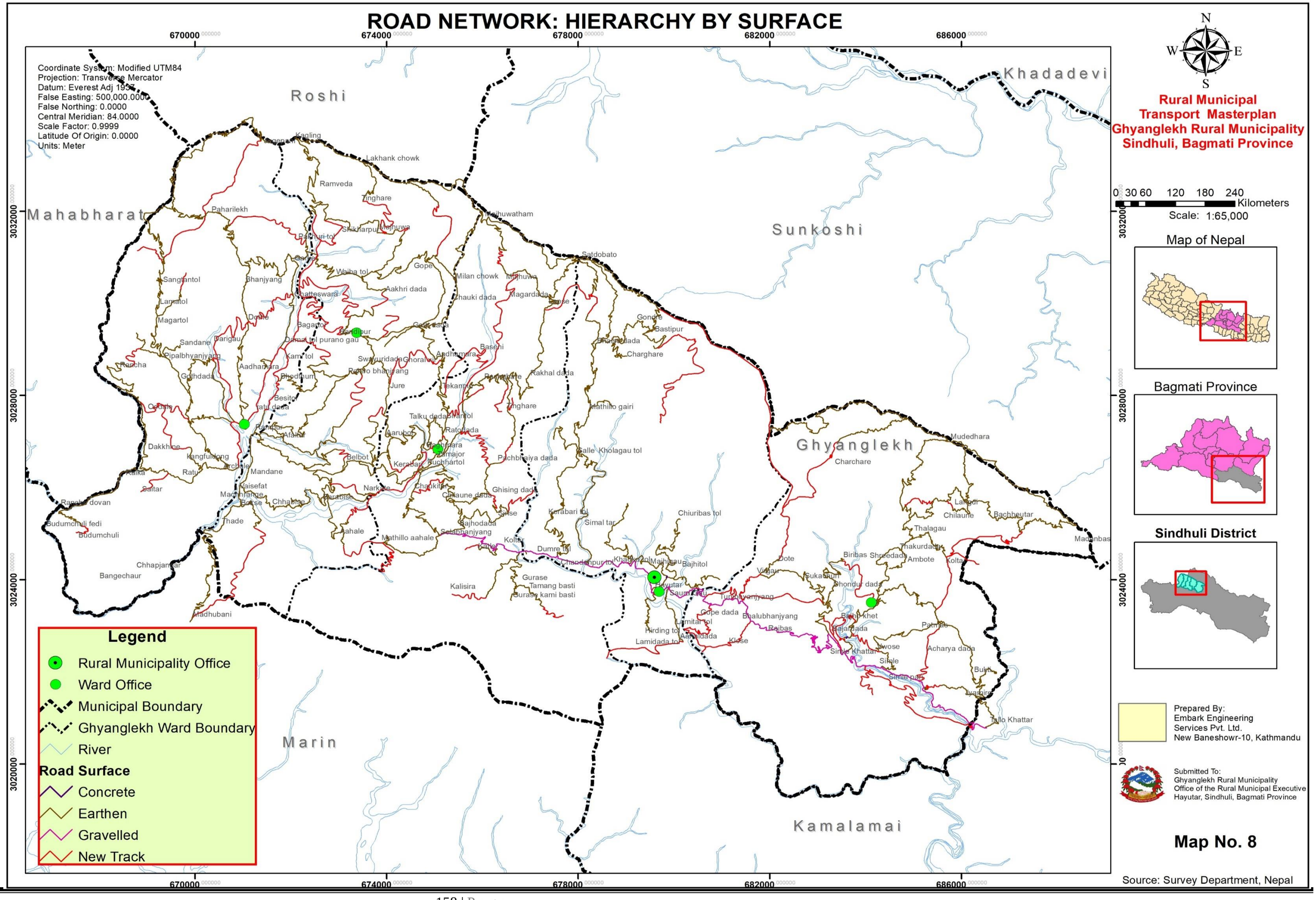
EXISTING TRANSPORTATION NETWORK MAP

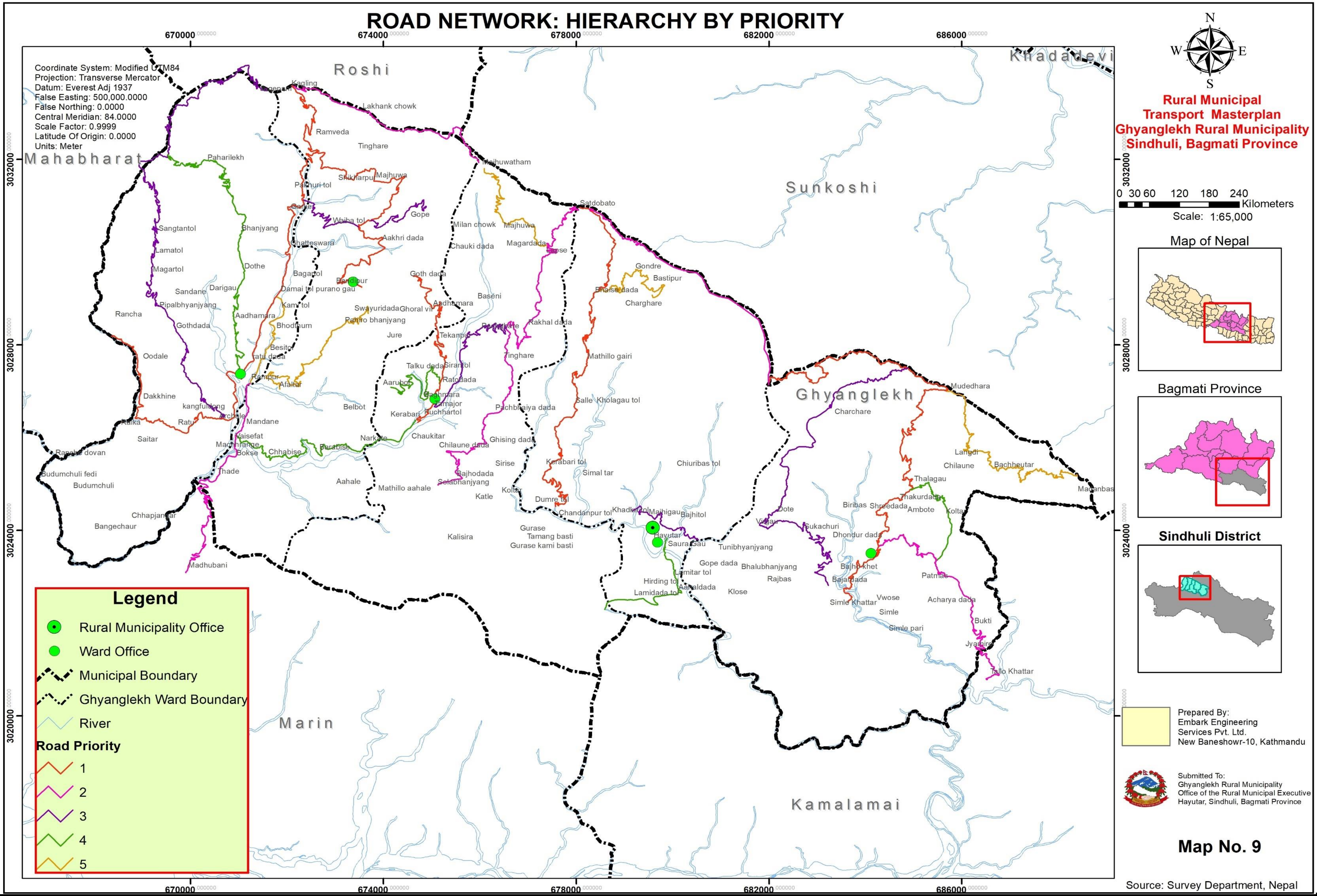


RURAL MUNICIPAL INVENTORY MAP
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
670000
674000
678000
682000
686000
3032000
3028000
3024000
3020000
Roshi
Mahabharat
Sunkoshi
Khadadevi
Ghyanglekh
Marin
Kamalamai
Kagling
Lakhank chowk
Ramveda
Tinghare
Majhuwatham
Paharilekh
Shikharpur
Majhuwa
Satdobato
Sangtantol
Bhanjyang
Waiba tol
Gope
Aakhri dada
Milan chowk
Chauki dada
Magardada
Lamatol
Magartol
Chatteswara
Gonjre
Bastipur
Bagartol
Sandipur
Aadhamara
Baseni
Charghare
Rakhal dada
Pipalbhyanjyang
Kami tol
Swayundada
Ghoral
Tekanpur
Rancha
Gathdada
Aadhamara
Jure
Besitol
Tinghare
Mathillo gairi
Qodale
Talku dada
Ratodada
Dakkhine
Kangfuldong
Belbot
Baghmara
Tamajor
Pachbhaiya dada
Salle Kholagau tol
Mudedhara
Charchare
Mandane
Raika
Ratu
Saitar
Aisefat
Chhabise
Narkate
Chaukitar
Ghising dada
Chilaune dada
Rancle dovan
Bokse
Thade
Kerabari tol
Chiuribas tol
Langdi
Chilaune
Bachbeutar
Thalagau
Budumchuli fedi
Budumchuli
Aahale
Solabhanjyang
Mathillo aahale
Bajhodada
Simal tar
Thakurdada
Madanbas
Kolitar
Dumre tol
Chandanpur tol
Khadka tol
Majhigau
Bajhitol
Dote
Biribas
Shreedada
Ambote
Koltar
Chhapjatgar
Bangechaur
Kalisira
Gurase
Tamang basti
Gurase kami basti
Vitgau
Sukanthuri
Dhondur dada
Hayutar
Saure gau
Tukunbhanjyang
Madhubani
Gope dada
Baijhe khet
Lamtar tol
Bhalubhanjyang
Rajbas
Hirding tol
Lamidada tol
Aahaldada
Klose
Bajardada
Patibas
Simle Khattar
Awose
Acharya dada
Simle
Simle pari
Bukti
Jyamire
Tallo Khattar
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Road Class
A
B
C
D
N
S
W
E
Rural Municipal
Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 30 60 120 180 240
Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Prepared By:
Embark Engineering
Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 6
Source: Survey Department, Nepal

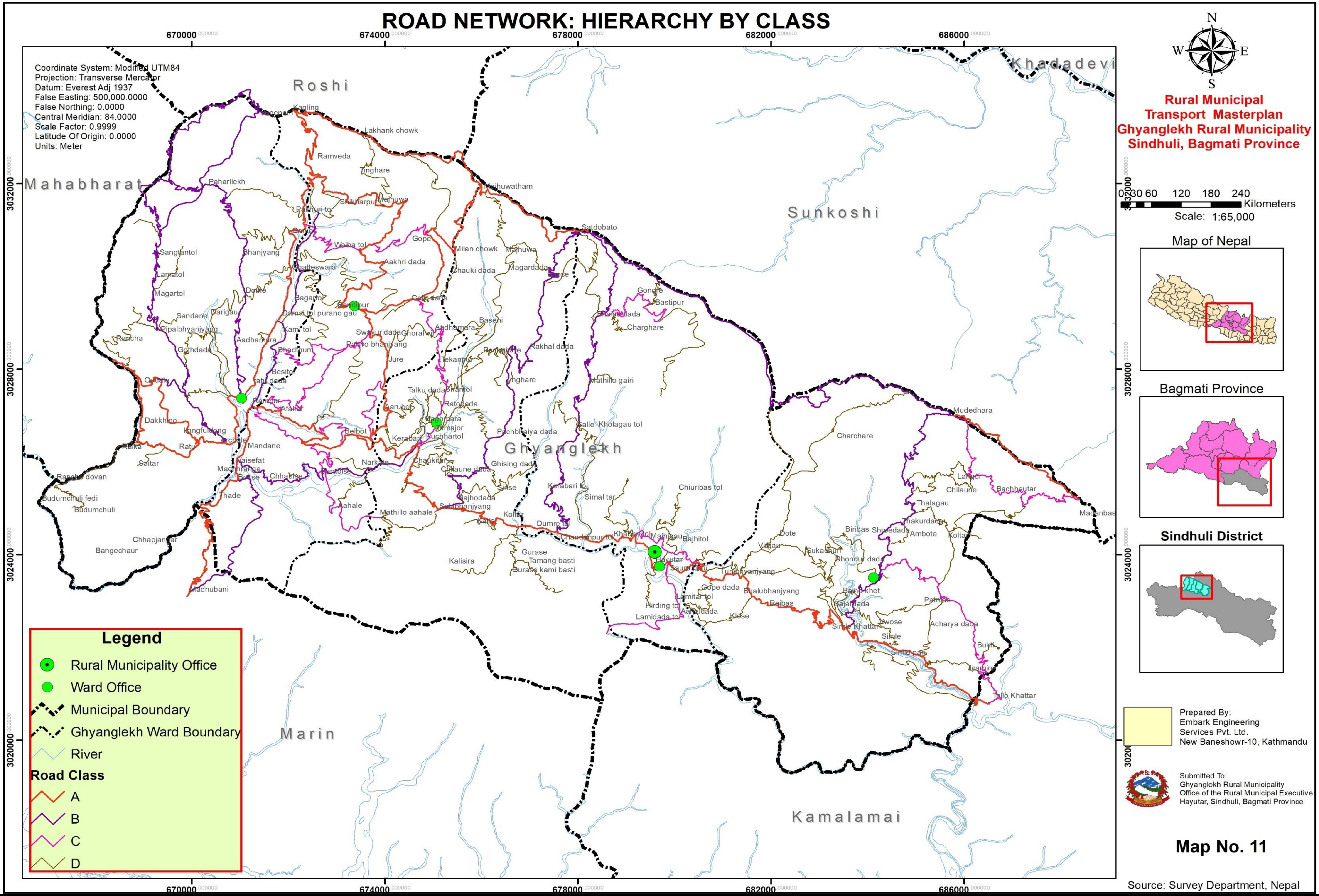

ROAD NETWORK: NEW TRACKS
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Roshi
Mahabharat
Sunkoshi
Khadadevi
Ghyanglekh
Marin
Kamalamai
Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 30 60 120 180 240 Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
DRCN
New Track
Prepared By:
Embark Engineering Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 7
Source: Survey Department, Nepal

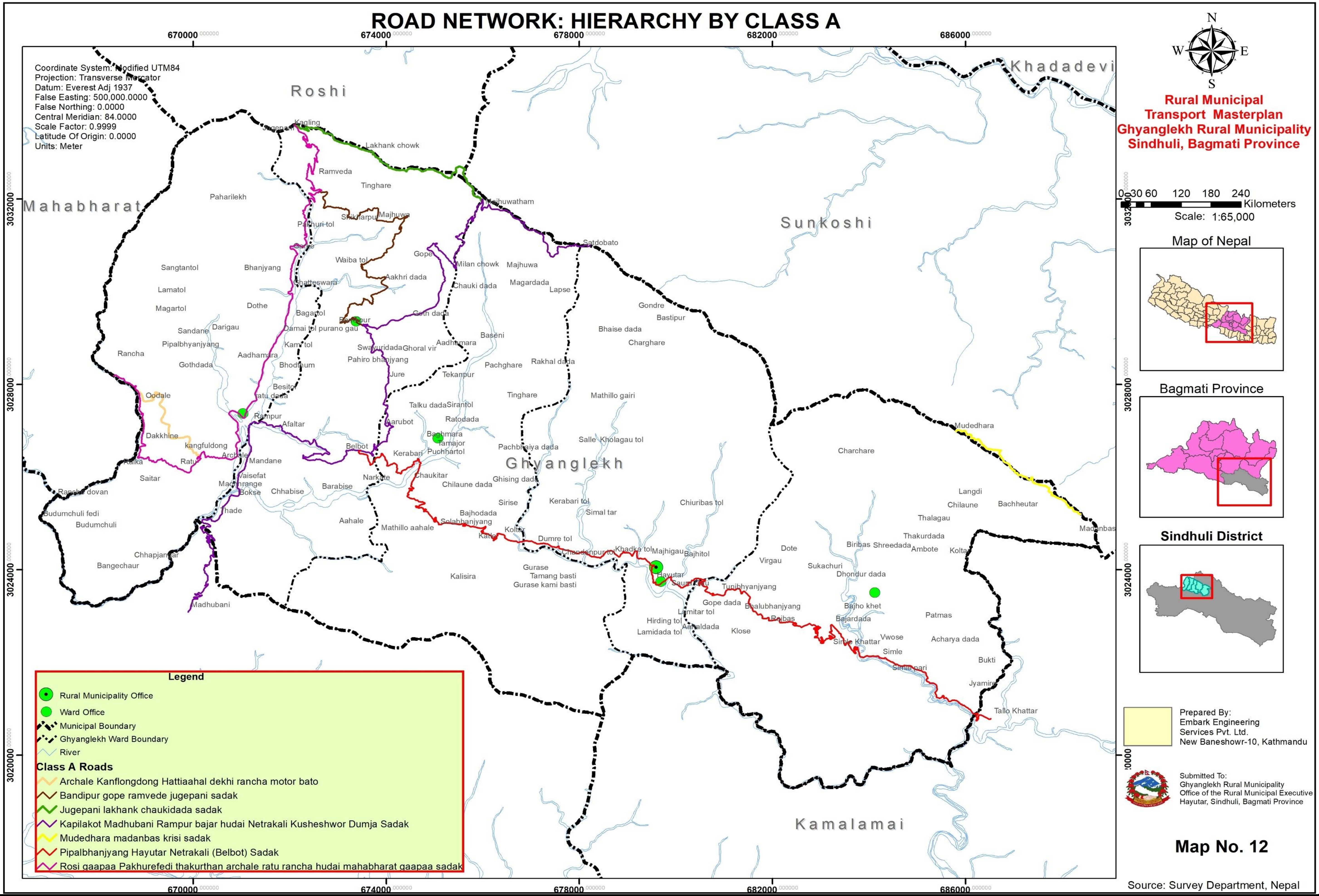
ROAD NETWORK: HIERARCHY BY SURFACE




ROAD NETWORK: HIERARCHY BY PRIORITY
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Roshi
Khadadevi
Mahabharat
Sunkoshi
Ghyanglekh
Marin
Kamalamai
Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 30 60 120 180 240 Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Road Priority
1
2
3
4
5
Prepared By:
Embark Engineering Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 9
Source: Survey Department, Nepal

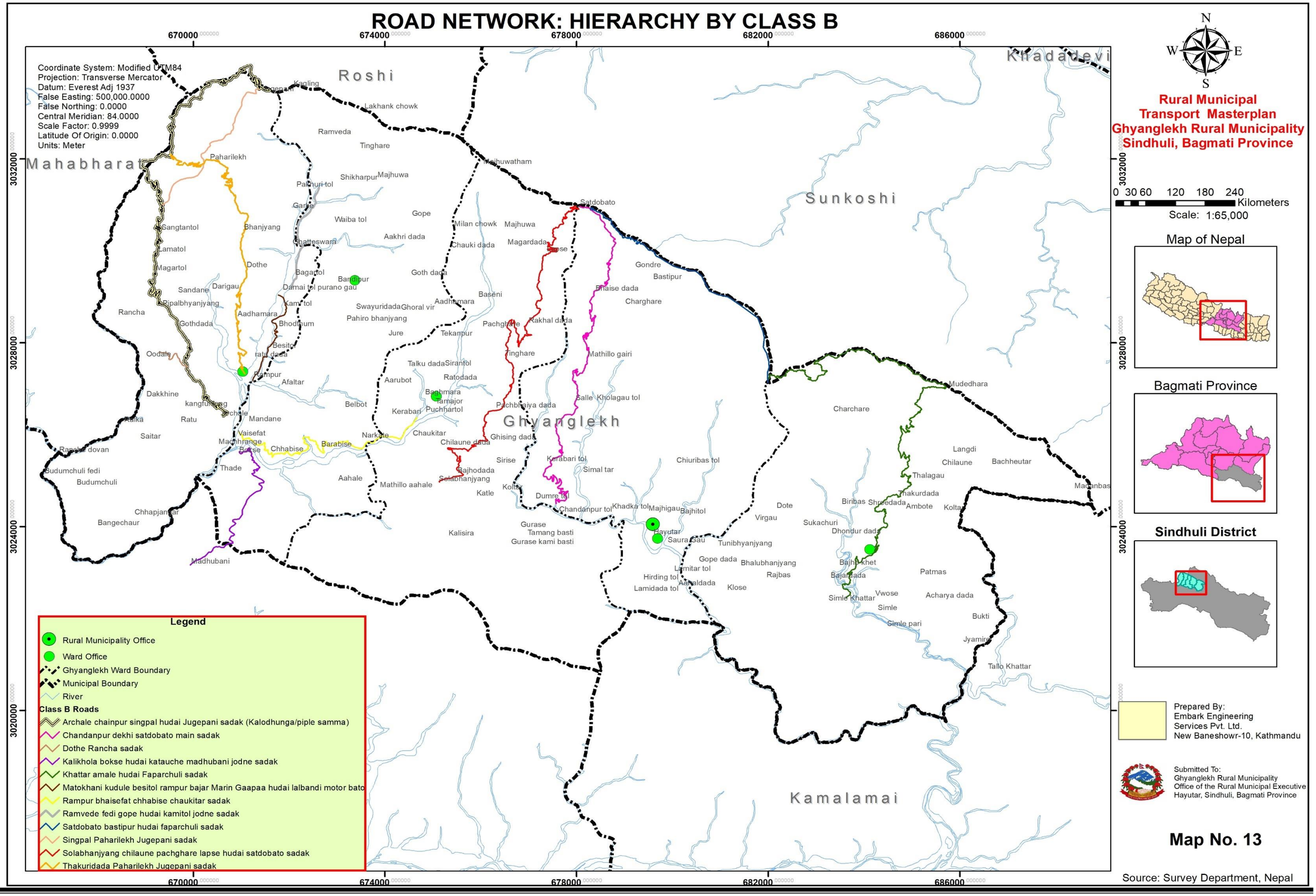
ROAD NETWORK: HIERARCHY BY WIDTH
670000
674000
678000
682000
686000
3032000
3028000
3024000
3020000
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Roshi
Khadadevi
Mahabharat
Sunkoshi
Ghyanglekh
Kamalamai
N
S
E
W
Rural Municipal
Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 30 60 120 180 240
Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Prepared By:
Embark Engineering
Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 10
Source: Survey Department, Nepal
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Road Width
New Tracks
Upto 3.5m
3.5m - 4m
4m - 5m
5m - 6.25m
Kagling
Lakhank chowk
Ramveda
Pāharilekh
Jinghare
Majhuwatham
Shikharpur
Majhuwa
Satdobato
Sangtantol
Shanjyang
Gope
Milan chowk
Majhuwa
Aakhri dada
Chauki dada
Magardada
Lamatol
Magartol
Sandane
Darigau
Bagaitol
Sandipur
Damai tol purano gau
Gonore
Bastipur
Charghare
Pipalbhanjyang
Rancha
Aadhamara
Kami tol
Swayuridada
Ghoral
Andheri
Baseni
Gothdada
Rakhal dada
Jure
Tekanpur
Besitol
Odale
Tinghare
Mathillo gairi
Talku dada
Ratodada
Aarubot
Dakkhine
Kangfuldong
Belbot
Kerabari
Buchhartol
Pachbhaiya dada
Salle
Kholagau tol
Mandane
Ratu
Charchare
Kaisefat
Saltar
Narkate
Chaukitar
Ghising dada
Ranabi dovan
Chhapse
Chilaune dada
Kerabari tol
Chiuribas tol
Budumchuli fedi
Budumchuli
Thade
Aahale
Mathillo aahale
Bajhodada
Solabhanjyang
Simal tar
Kolta
Dumre tol
Chandanpur tol
Khatkezol
Majhigau
Bajhitol
Chhapjangar
Bangechaur
Kalisira
Gurase
Tamang basti
Gurase kami basti
Hayutar
Saunetar
Madhubani
Mudedhara
Langdi
Chilaune
Bachheutar
Thalagau
Thakurdada
Biribas
Shreedada
Ambote
Kolta
Mahanbas
Dote
Vitar
Sukachuri
Dhondur dada
Tunibhanjyang
Gope dada
Bhalubhanjyang
Lamitar tol
Hirding tol
Lamidada tol
Aamdada
Rajbas
Klose
Rajabdada
Bahun khet
Patale
Awose
Acharya dada
Simle Khattar
Simle
Simle pari
Bukti
Jyamire
Tallo Khattar

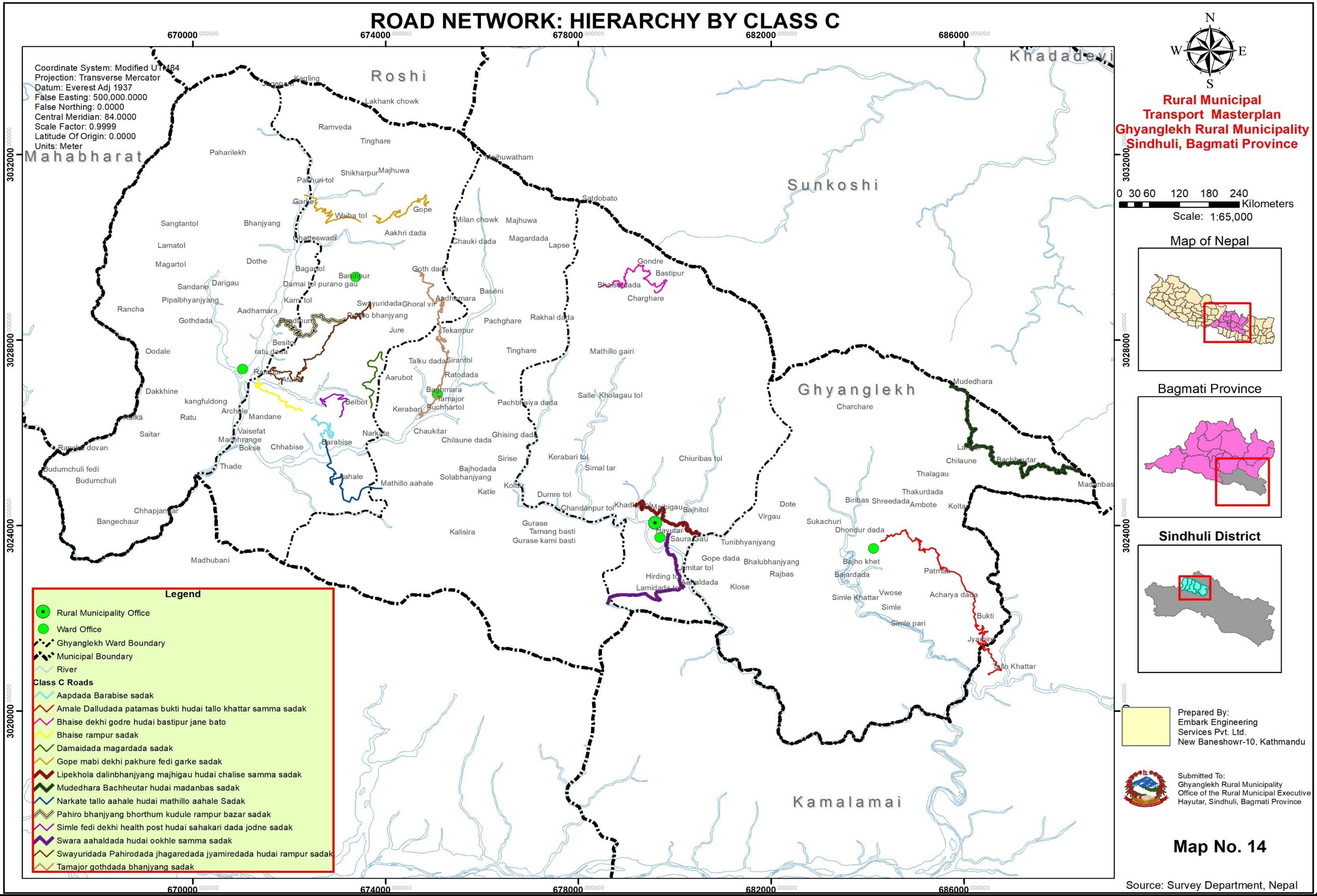

ROAD NETWORK: HIERARCHY BY CLASS
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Roshi
Mahabharat
Sunkoshi
Khadadevi
Ghyanglekh
Marin
Kamalamai
Rural Municipal Transport Masterplan Ghyanglekh Rural Municipality Sindhuli, Bagmati Province
0 30 60 120 180 240 Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Road Class
A
B
C
D
Prepared By: Embark Engineering Services Pvt. Ltd. New Baneshowr-10, Kathmandu
Submitted To: Ghyanglekh Rural Municipality Office of the Rural Municipal Executive Hayutar, Sindhuli, Bagmati Province
Map No. 11
Source: Survey Department, Nepal

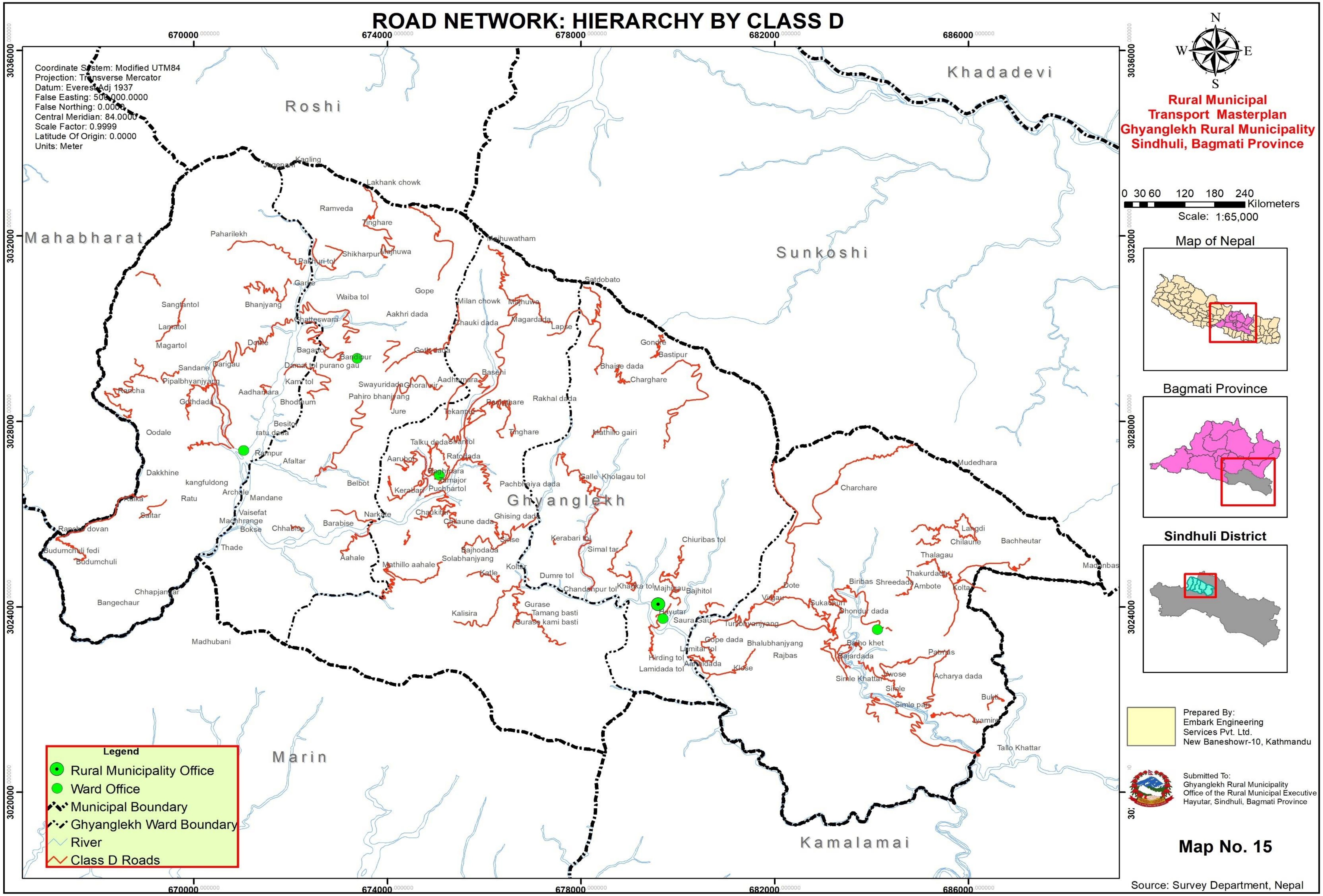


ROAD NETWORK: HIERARCHY BY CLASS A
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Roshi
Mahabharat
Sunkoshi
Khadadevi
Ghyanglekh
Kamalamai
Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Class A Roads
Archale Kanflongdong Hattiaahal dekhi rancha motor bato
Bandipur gope ramvede jugepani sadak
Jugepani lakhank chaukidada sadak
Kapilakot Madhubani Rampur bajar hudai Netrakali Kusheshwor Dumja Sadak
Mudedhara madanbas krisi sadak
Pipalbhanjyang Hayutar Netrakali (Belbot) Sadak
Rosi gaapaa Pakhurefedi thakurthan archale ratu rancha hudai mahabharat gaapaa sadak
Prepared By:
Embark Engineering Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 12
Source: Survey Department, Nepal

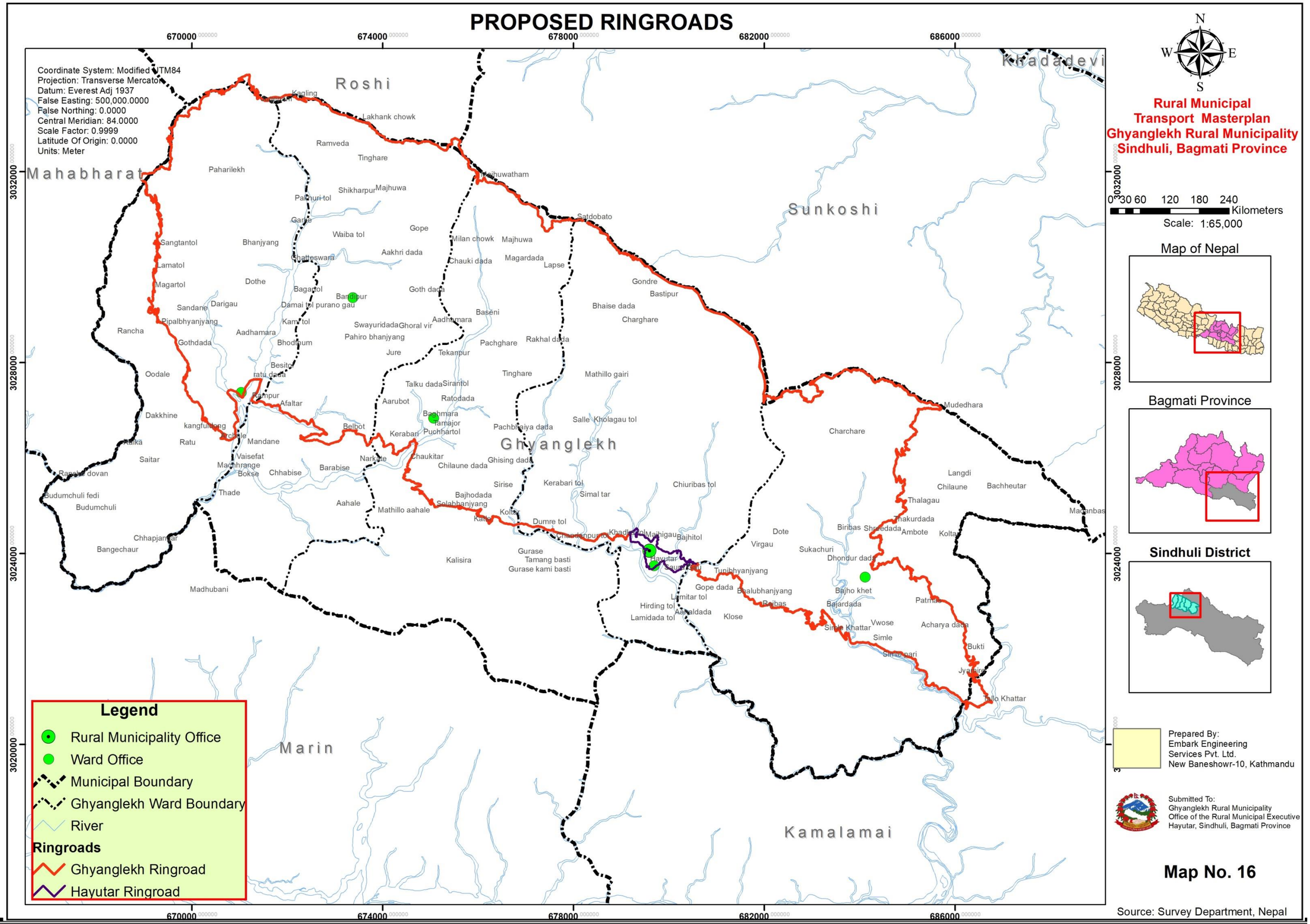
ROAD NETWORK: HIERARCHY BY CLASS B

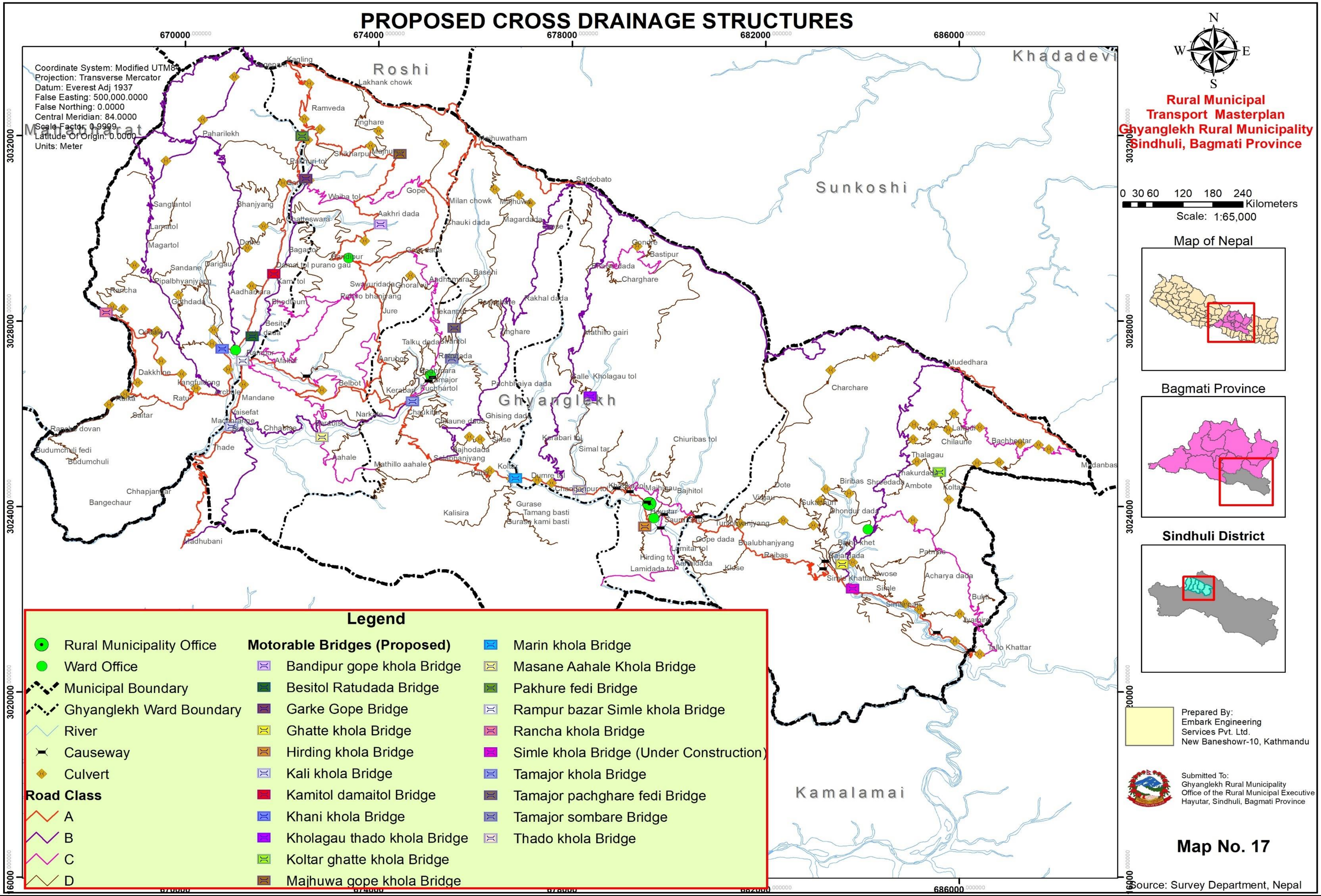



ROAD NETWORK: HIERARCHY BY CLASS C
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Roshi
Mahabharat
Sunkoshi
Ghyanglekh
Kamalamai
Khadadevi
Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 30 60 120 180 240 Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Legend
Rural Municipality Office
Ward Office
Ghyanglekh Ward Boundary
Municipal Boundary
River
Class C Roads
Aapdada Barabise sadak
Amale Dalludada patamas bukti hudai tallo khattar samma sadak
Bhaise dekhi godre hudai bastipur jane bato
Bhaise rampur sadak
Damaidada magardada sadak
Gope mabi dekhi pakhure fedi garke sadak
Lipekhola dalinbhanjyang majhigau hudai chalise samma sadak
Mudedhara Bachheutar hudai madanbas sadak
Narkate tallo aahale hudai mathillo aahale Sadak
Pahiro bhanjyang bhorthum kudule rampur bazar sadak
Simle fedi dekhi health post hudai sahakari dada jodne sadak
Swara aahaldada hudai ookhle samma sadak
Swayuridada Pahirodada jhagaredada jyamiredada hudai rampur sadak
Tamajor gothdada bhanjyang sadak
Prepared By:
Embark Engineering Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 14
Source: Survey Department, Nepal

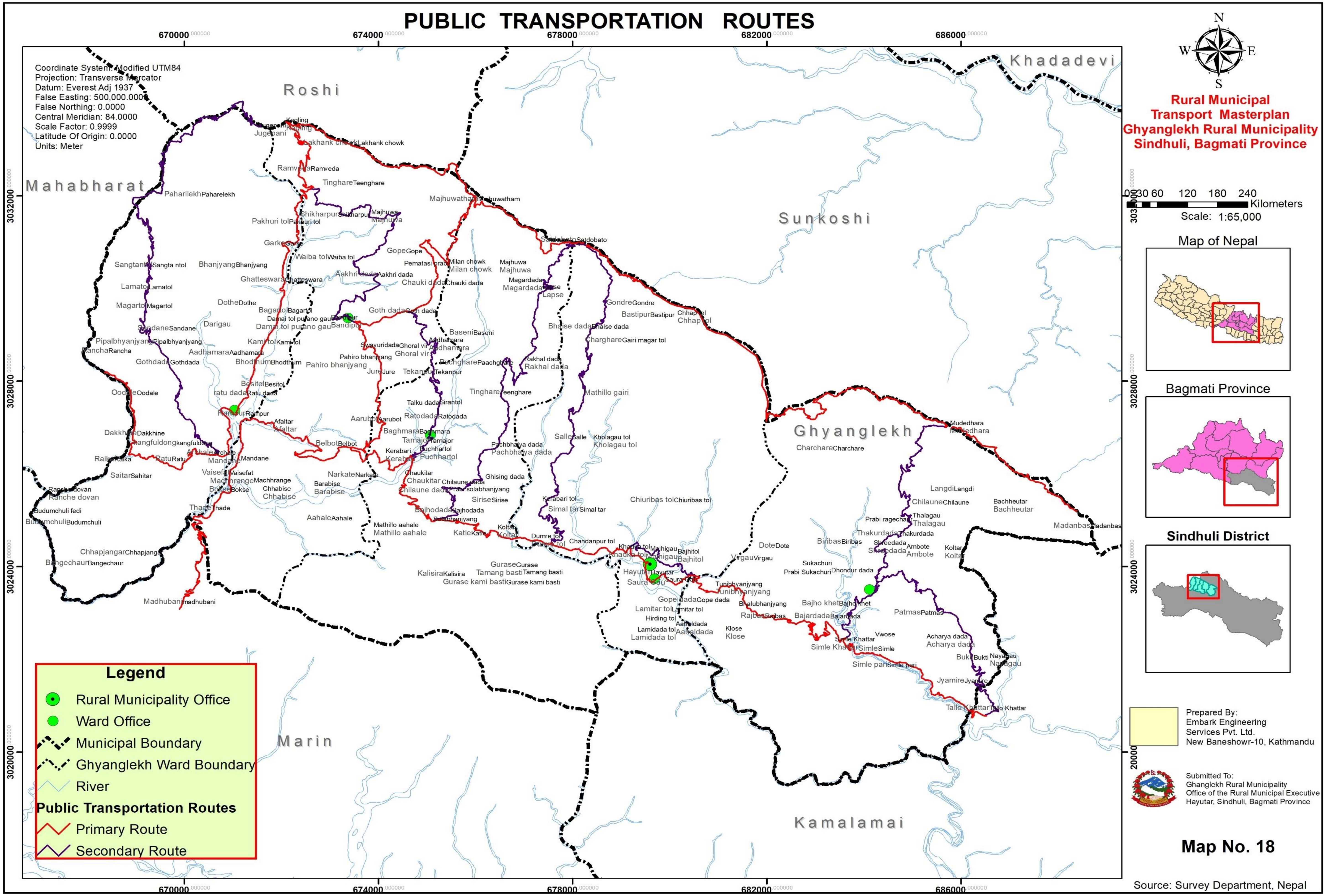

ROAD NETWORK: HIERARCHY BY CLASS D
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Roshi
Khadadevi
Mahabharat
Sunkoshi
Ghyanglekh
Marin
Kamalamai
Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 30 60 120 180 240 Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Class D Roads
Prepared By:
Embark Engineering Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 15
Source: Survey Department, Nepal

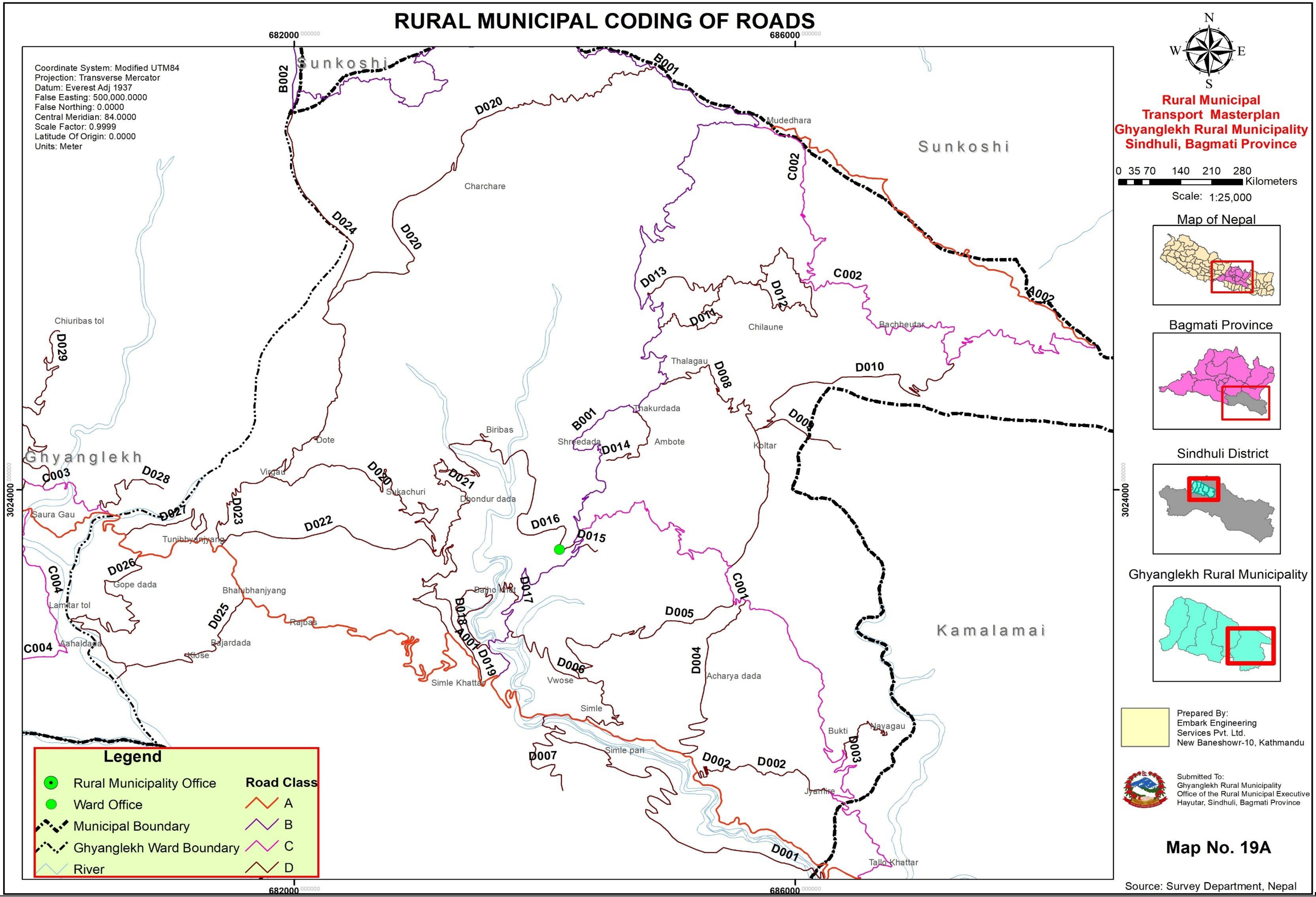
PROPOSED RINGROADS



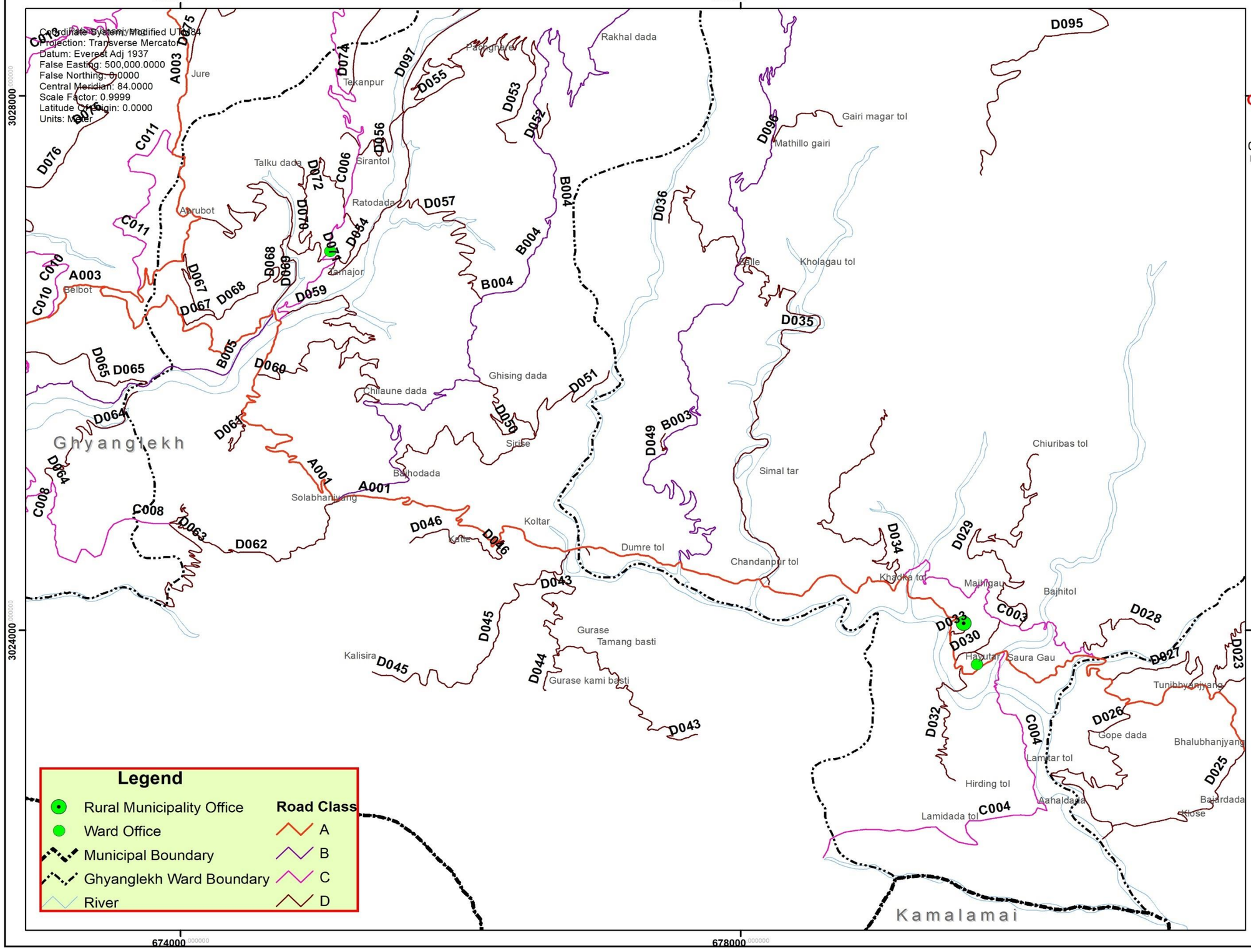


PROPOSED CROSS DRAINAGE STRUCTURES
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Roshi
Khadadevi
Sunkoshi
Ghyanglekh
Kamalamai
Rural Municipal
Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 30 60 120 180 240
Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Causeway
Culvert
Road Class
A
B
C
D
Motorable Bridges (Proposed)
Bandipur gope khola Bridge
Besitol Ratudada Bridge
Garke Gope Bridge
Ghatte khola Bridge
Hirding khola Bridge
Kali khola Bridge
Kamitol damaitol Bridge
Khani khola Bridge
Kholagau thado khola Bridge
Koltar ghatte khola Bridge
Majhuwa gope khola Bridge
Marin khola Bridge
Masane Aahale Khola Bridge
Pakhure fedi Bridge
Rampur bazar Simle khola Bridge
Rancha khola Bridge
Simle khola Bridge (Under Construction)
Tamajor khola Bridge
Tamajor pachghare fedi Bridge
Tamajor sombare Bridge
Thado khola Bridge
Prepared By:
Embark Engineering
Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 17
Source: Survey Department, Nepal


PUBLIC TRANSPORTATION ROUTES
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Roshi
Mahabharat
Sunkoshi
Khadadevi
Ghyanglekh
Marin
Kamalamai
Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
Kilometers
Scale: 1:65,000
Map of Nepal
Bagmati Province
Sindhuli District
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Public Transportation Routes
Primary Route
Secondary Route
Prepared By:
Embark Engineering
Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 18
Source: Survey Department, Nepal


RURAL MUNICIPAL CODING OF ROADS
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 35 70 140 210 280 Kilometers
Scale: 1:25,000
Map of Nepal
Bagmati Province
Sindhuli District
Ghyanglekh Rural Municipality
Prepared By:
Embark Engineering Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 19A
Source: Survey Department, Nepal
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Road Class
A
B
C
D
Sunkoshi
Ghyanglekh
Kamalamai
682000
686000
3024000
Charchare
Mudedhara
Chiuribas tol
Chilaune
Bachheutar
Thalagau
Thakurdada
Ambote
Shreedada
Biribas
Dote
Koltar
Virgau
Sukachuri
Dhondur dada
Saura Gau
Tunibhanjyang
Gope dada
Bhalubhanjyang
Lamitar tol
Rajbas
Aahaldada
Bajardada
Khose
Simle Khattar
Vwose
Simle
Acharya dada
Bukti
Nayagau
Simle pari
Jyamire
Tallo Khattar
A001
A002
B001
B002
C001
C002
C003
C004
D001
D002
D003
D004
D005
D006
D007
D008
D009
D010
D011
D012
D013
D014
D015
D016
D017
D018
D019
D020
D021
D022
D023
D024
D025
D026
D027
D028
D029

RURAL MUNICIPAL CODING OF ROADS



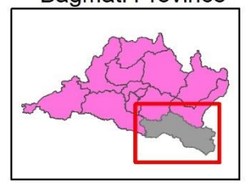
Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province

0 35 70 140 210 280 Kilometers

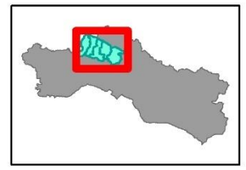
Scale: 1:25,000

Map of Nepal

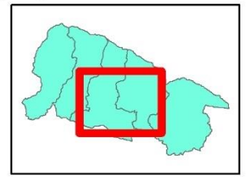
Bagmati Province



Sindhuli District



Ghyanglekh Rural Municipality



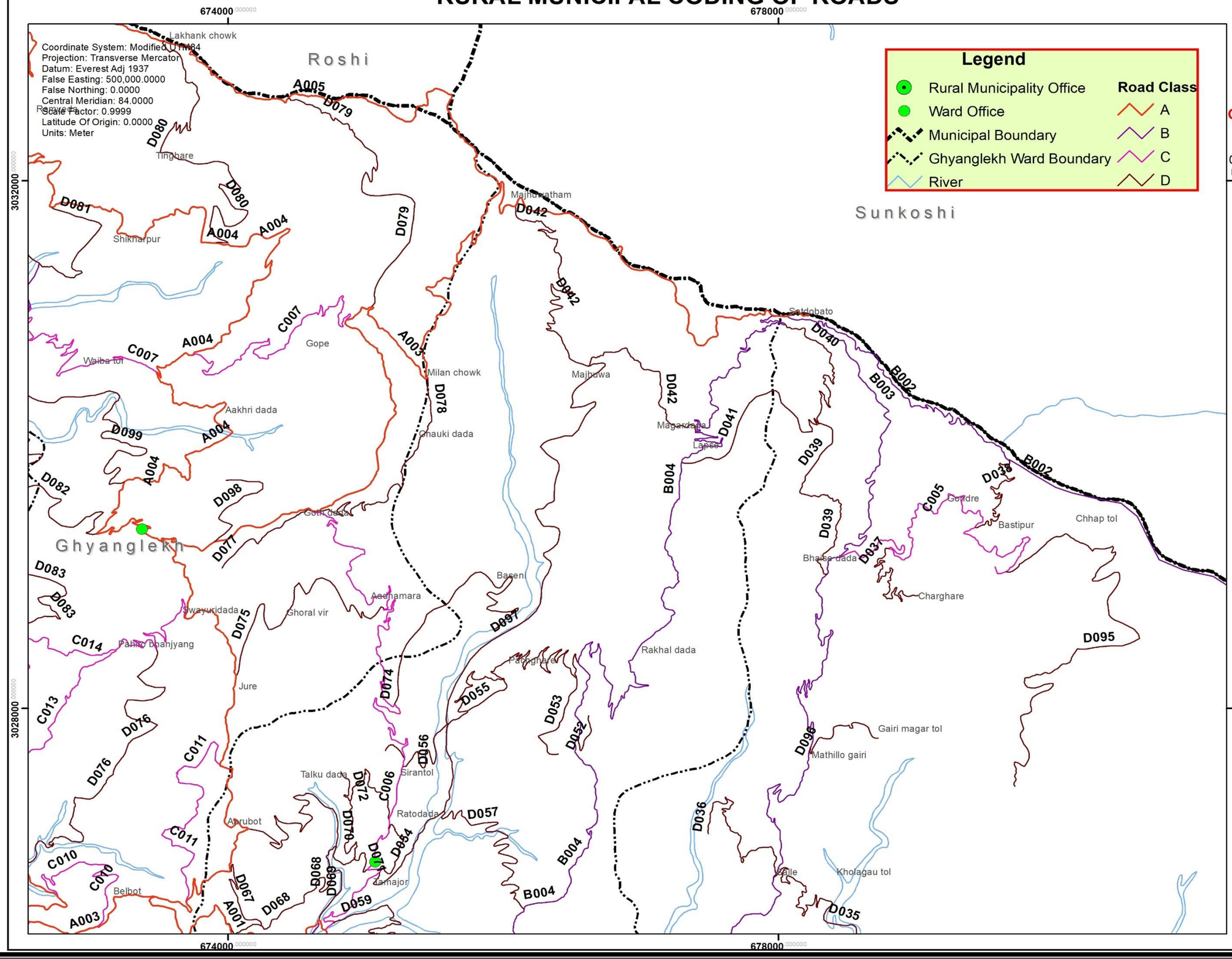
Prepared By:
Embark Engineering
Services Pvt. Ltd.
New Baneshowr-10, Kathmandu

Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province

Map No. 19B

Source: Survey Department, Nepal

RURAL MUNICIPAL CODING OF ROADS



Legend

- Rural Municipality Office
- Ward Office
- Municipal Boundary
- Ghyanglekh Ward Boundary
- River

Road Class

- A
- B
- C
- D

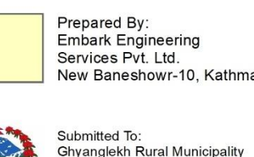
N W E S

Rural Municipal Transport Masterplan Ghyanglekh Rural Municipality Sindhuli, Bagmati Province

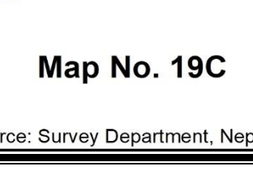
0 35 70 140 210 280 Kilometers

Scale: 1:25,000

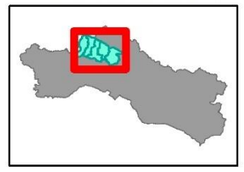
Map of Nepal



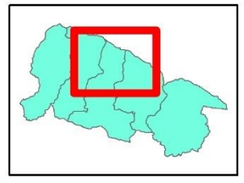
Bagmati Province



Sindhuli District



Ghyanglekh Rural Municipality



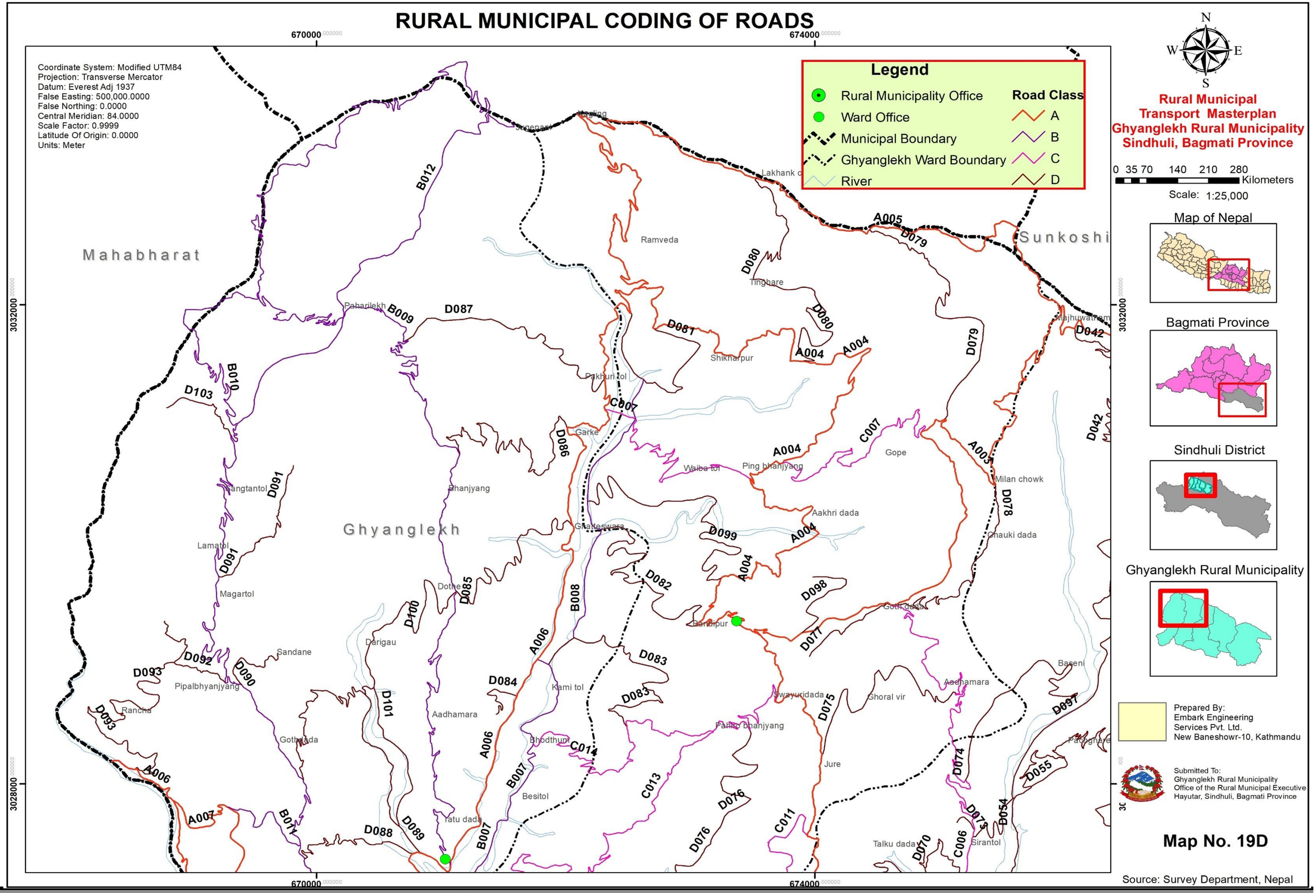
Prepared By:
Embark Engineering
Services Pvt. Ltd.
New Baneshowr-10, Kathmandu

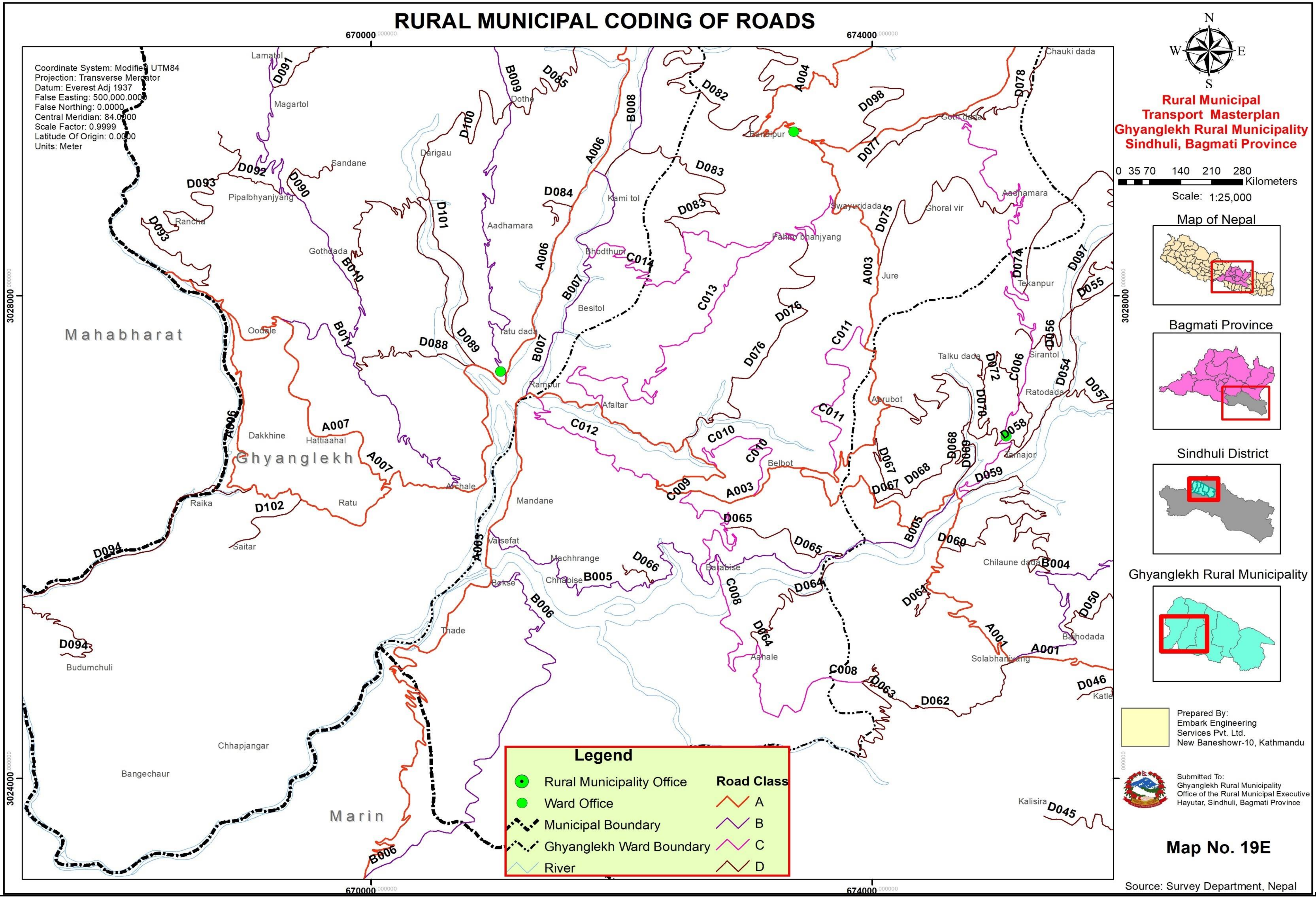
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province

Map No. 19C

Source: Survey Department, Nepal

RURAL MUNICIPAL CODING OF ROADS




RURAL MUNICIPAL CODING OF ROADS
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter
Rural Municipal Transport Masterplan
Ghyanglekh Rural Municipality
Sindhuli, Bagmati Province
0 35 70 140 210 280 Kilometers
Scale: 1:25,000
Map of Nepal
Bagmati Province
Sindhuli District
Ghyanglekh Rural Municipality
Prepared By:
Embark Engineering Services Pvt. Ltd.
New Baneshowr-10, Kathmandu
Submitted To:
Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli, Bagmati Province
Map No. 19E
Source: Survey Department, Nepal
Legend
Rural Municipality Office
Ward Office
Municipal Boundary
Ghyanglekh Ward Boundary
River
Road Class
A
B
C
D
Mahabharat
Ghyanglekh
Marin
670000
674000
3028000
3024000

Ghyanglekh Rural Municipality
Office of the Rural Municipal Executive
Hayutar, Sindhuli
Bagmati Province, Nepal