

ORIGINAL



## **Building Design Authority (P) Ltd**

*in joint Venture with*

**B.N. Consultancy Pvt. Ltd and**

**PLUSH Engineering & architects (P) Ltd Kathmandu.**

## **Monthly Progress Report**

**Regional Urban Development Project (RUDP)**

**Project Implementation Unit**

**Biratnagar, Nepal**



***July 2019***

**Biratnagar Metropolitan City (BMC), Nepal**

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## EXECUTIVE SUMMARY

This Project Monitoring Report mainly covers the Progress achieved in the component of Regional Urban Development Project (RUDP) in Biratnagar Metropolitan City, Nepal. The information has been provided in the following Chapters are mentioned below:

- 1. Introduction/ Background-** It provide brief Account on the Project and its Background stating why, how and when the Project was started in Biratnagar Metropolitan City.
- 2. Salient Feature of Contract Package: RUDP/ICB/BRT/2-** It provides brief Account of Contract Data with Major components of works to be carried out.
- 3. Sub Project Components-** It provides a brief Account on the various Sectors of the Project component summarizing the respective Progress such as Sewer Line, Storm Water Drain, Road side Drain, Roads and Lanes and Electrification Work if any. This Chapter further covers Environment Mitigation Measures and Social Safeguard measures.
- 4. Objective and Scope of the Works-** This Chapter briefly describes the expected output of the Project and Scope of Consultant regarding execution of Work.
- 5. Progress of Sub – Project Components-** This Chapter comprises the status of Work stating what kind of works are under Progress and how much Progress has been achieved till date. It further elaborates on the status of actual achievement versus the Targeted achievement till date. Sometimes, the project gets delayed due to unforeseen obstacles which are rampant in the case of Nepal. Such events are also enlisted to clarify the reason for delay in the project.
- 6. Details of Pre Cast Activities-** In the urban area, as ongoing projects creates a lot of disturbances and difficulties in the life of the people living in the project area, the work has to be conducted in the speedy manner to finish it as soon as possible. Precast of the project components are the best alternative to overcome this issue and details of precast activities are provided in this chapter.
- 7. Contractor’s Manpower and Contractor’s Equipment-** Chapter 7 and Chapter 8 deal with summary of Manpower and Equipment respectively stating whether Resources owned by the Contractor are sufficient for the execution of Contract.

## 1. PROJECT DESCRIPTION

### 1.1. INTRODUCTION/BACKGROUND

GoN has negotiated loan with Asian Development Bank for the Regional Urban Development Project (RUDP) in Nepal. The RUDP, in the line with ADB's water and urban operation plans, will construct and upgrade urban infrastructure in eight towns in the Terai Region of Nepal, improve operational effectiveness of these eight municipalities. The project will also build institutional capacity of DUDBC for urban planning, project planning and project preparation in order to proactively shape urbanization in Nepal and implement the National Urban development strategy. Biratnagar is one of the eight municipal towns included in the RUDP. The subcomponent of the RUDP covers the construction and improvement of sewerage, drainage and roads and design of Integrated Solid Waste Management System for Biratnagar Municipality. Building Design Authority (P) Ltd (Nepal), B.N. Consultancy Pvt. Ltd and PLUS Engineers & Architects (P) Ltd Kathmandu and have entered for a Contract of Consulting Services with Regional Urban Development Project (RUDP), Project Implementation Unit (PIU), Biratnagar Metropolitan City on 28<sup>th</sup> October 2017.

Regional Urban Development Project (RUDP) the Department of Urban Development and Building Construction (DUDBC), under the Ministry of Urban Development (MUD) through the Government of Nepal (GoN) has received the loan from Asian Development Bank (ADB) Loan 47252-NEP.

In line with ADB's Strategy 2020 and based on Nepal's fundamental long term needs and on the GoN's priority, the ADB is continuing to support the Government in (i) improving urban infrastructure; improving access to water supply and sanitation (ii) supporting urban environmental improvement (iii) strengthening the operation and management skills of local governments. The Regional Urban Development Project (RUDP) is forward to promote healthy cities by creating healthier urban environments and was formulated under the PPTA 2010.



**2. CONTRACT DATA: - RUDP/ICB/BRT/2**

<b>General Features</b>	
Name of Project	Regional Urban Development Project(RUDP)
Executing Agency	Government of Nepal,
	Ministry of Urban Development
	Department of Urban Development and Building Construction (DUDBC)
Implementing Agency	Biratnagar Metropolitan City, Biratnagar
Funded By	Asian Development Bank & Government of Nepal
Package	Construction and Completion of Sewerage, Drainage, Road, Footpath and Road furniture works
Contract No.	RUDP/ICB/BRT/2
Location	Biratnagar Metropolitan City, Biratnagar
Consultant	Building Design Authority (P) LTD in Joint Venture With B.N. consultancy Pvt and PLUS Engineers and Architects (P) Ltd Kathmandu.
Date of Sign of Design and Supervision Consulting Service	28th August 2017
Date of Commencement of Design and Supervision Consulting Service	6th September 2017
Date of Completion	5th September 2020
Contractor	ZHONGHENG Construction Group International Engineering Co Ltd. Beijing, China.
Date of Agreement Made	10 <sup>th</sup> October 2017
Date of Commencement	2 <sup>nd</sup> November 2017
Date of Completion	1 <sup>st</sup> November 2019
Contract Amount including PS and VAT	NRs. 2,611,092,249.63
<b>Progress</b>	
Road Rehabilitation (Asphalt)	47.97%
Sewer Line	88.73%
Storm Drain	100.00%
Road Side Drain	105.11%



<b>General Features</b>	
Integrated Solid Waste Management (ISWM) Design	Inception Report as well as Stakeholder’s Analysis, Communication Strategy and Consultation Plan for Integrated Solid Waste Management (ISWM) has already been submitted. Due to Socio Environment Problem, Progress of Integrated Solid Waste Management (ISWM) design has been hindered.
Physical Progress up to date	<b>With respect to Revised Work Program-01:</b> Planned: 78.93%, Actual: 71.52%; Lead (+) or Lag (-) by (-) 7.41% Lag  Physical progress lagging due to start of monsoon, unavailability of shut down for relocation of electrical poles by (Nepal Electricity Authority) NEA on time and shifting of telecom poles on time by (Nepal Telecom) NTC, etc.
Financial Progress up to date ( <i>on the basis of IPC forwarded for disbursement</i> )	In Percentage: 61.95%, In Figure: NRs. <b>1,617,499,379.94</b> (including VAT and PS) up to IPC – 10. <b>In Words:</b> NRs. One Billion Six Hundred Seventeen Millions Four Hundred Ninety Nine Thousand Three Hundred Seventy Nine and Ninety Four Paise Only.

### 3. SUMMARY OF PROGRESS STATUS OF ALL MAJOR COMPONENTS

S.No	Description	Unit	BoQ Quantity	Progress up to date	Remaining	Progress Status expressed in (%)	Remarks
<b>1</b>	<b>Sewer Line</b>						
a	HDPE/RCC	m	20,082.00	17,818.50	2,263.50	88.73%	
b	Manhole	No.	685.00	549.00	136.00	80.15%	
c	Sewer Inlet	No.	1,010.00	595.00	415.00	58.91%	
d	House Connection	No.	3,784.00	1,307.00	2,477.00	34.54%	
<b>2</b>	<b>Storm Water Drain</b>						



S.No	Description	Unit	BoQ Quantity	Progress up to date	Remaining	Progress Status expressed in (%)	Remarks
a	RCC Drain	m	652.80	585.00	0.00	100.00%	Revised Length =585m
b	Piles	No.	132.00	138.00	0.00	100.00%	Exceeded 6 Nos. Piles.
<b>3 Road</b>							
a	Subgrade	m	73,860.00	45,509.41	28,350.59	61.62%	
b	Subbase	m	73,860.00	45,369.21	28,490.79	61.43%	
c	Base	m	73,860.00	39,575.22	34,284.78	53.58%	
d	Prime	m	73,860.00	35,431.14	38,428.86	47.97%	
e	Asphalt	m	73,860.00	35,431.14	38,428.86	47.97%	
<b>4 Road Side Drain</b>							
		m	26,050.00	27,382.19	(1,332.19)	105.11%	Exceeded quantity lengthwise, approval of VO-01 is under progress

**3.1. SUB PROJECT COMPONENTS**

**3.1.1. SEWER LINES**

Trunk Line T1 & T2 were already completed in STIUEIP (Secondary Town Integrated Urban Environmental Improvement Project) and remaining part of sewer lines in T4 completed and T3 have been identified and necessary survey and construction works are in progress. Almost all the lines were completed except some of T3 secondary sewer lines. Details of proposed sewer lines are as below: -



**Table 1: PROPOSED ALL MAJOR COMPONENTS OF THE PROJECT**

<b>S. No.</b>	<b>Description</b>	<b>Unit</b>	<b>Original Quantity</b>
<b>1</b>	<b>Sewerage Pipe Supply and Installation</b>	<b>m</b>	<b>20,082.00</b>
	<b>Reinforced Concrete Pipe laying and jointing</b>		<b>2241.00</b>
	Line T2 (Secondary)	m	206.00
	Line T3 (Trunk)	m	1905.00
	Line T4 (Trunk)	m	130.00
	<b>HDPE laying and jointing</b>	<b>m</b>	<b>17,841.00</b>
	Line T1 (Secondary)	m	1,825.00
	Line T2 (Secondary)	m	3,927.00
	Line T3 (Secondary)	m	9,997.00
	Line T4 (Secondary)	m	2,092.00
<b>2</b>	<b>Manhole ( Brick / RCC)</b>	<b>no.</b>	<b>685.00</b>
<b>3</b>	<b>Sewer Inlet</b>	<b>no.</b>	<b>1,010.00</b>
<b>4</b>	<b>House Connection</b>	<b>no.</b>	<b>3,784.00</b>
<b>5</b>	<b>Reinstatement of Roads</b>	<b>km</b>	<b>73.86</b>
<b>6</b>	<b>Road side Drain</b>	<b>Km</b>	<b>26.05</b>
<b>7</b>	<b>Storm Water Drain</b>	<b>m</b>	<b>652.8</b>



**Table: - 2 PHYSICAL PROGRESS IN SEWER LINES till date**

SN	Description	BoQ		Up to Pre Month		This month		Total to date		Progress %
		Length (m)	Manhole (Nos.)	Length (m)	Manhole (Nos.)	Length (m)	Manhole (Nos.)	Length (m)	Manhole (Nos.)	
<b>Hume Pipe:</b>										
1	Hume pipe (T2)	206.00	6.00	205.00	6.00			205.00	6.00	
2	Hume pipe (T3)	1,905.00	58.00	1,632.50	25.00			1,632.50	25.00	
3	Hume Pipe (T4)	130.00	4.00	130.00	4.00			130.00	4.00	
<b>Subtotal in (m)</b>		<b>2,241.00</b>	<b>68.00</b>	<b>1,967.50</b>	<b>35.00</b>			<b>1,967.50</b>	<b>35.00</b>	
<b>HDPE Pipe:</b>										
1	HDPE (T1)	1,825.00	57.00	1,743.20	54.00			1,743.20	54.00	
2	HDPE (T2)	3,927.00	147.00	3,153.40	121.00			3,153.40	121.00	
3	HDPE (T3)	9,997.00	316.00	8,902.50	283.00			8,902.50	283.00	
4	HDPE (T4)	2,092.00	68.00	2,051.90	56.00			2,051.90	56.00	
<b>Subtotal in (m)</b>		<b>17,841.00</b>	<b>588.00</b>	<b>15,851.00</b>	<b>514.00</b>			<b>15,851.00</b>	<b>514.00</b>	



SN	Description	BoQ		Up to Pre Month		This month		Total to date		Progress %
		Length (m)	Manhole (Nos.)	Length (m)	Manhole (Nos.)	Length (m)	Manhole (Nos.)	Length (m)	Manhole (Nos.)	
<b>Total</b>		<b>20,082.00</b>	<b>656.00</b>	<b>17,818.50</b>	<b>549.00</b>			<b>17,818.50</b>	<b>549.00</b>	<b>88.73%</b>

SN	Description	BoQ (Nos.)	Up to Pre Month	This month	Total to date	Progress %
1	Sewer inlet	1,010.00	595.00		595.00	58.91%
2	House connection	3,784.00	1,307.00		1,307.00	34.54%



### 3.1.2. STORM WATER DRAIN

The storm water drain CN2, and CN3 has been provisioned in Regional Urban Development Project (RUDP). The Contractor has already completed the works except some minor works at inlet and outlet which have been stopped due to monsoon. The detail of the progress is shown in the table:

**Table: 3 PROPOSED and PHYSICAL PROGRESS in STORM WATER DRAINS till date.**

S N	Name of Drain	Length in m					Type of Drain	Work Completed				Length of Covered Drain in m	Remarks
		Origin al	Revised	Progress		Cum ulativ e		Brick		RCC			
				Previo us	This Month			m	m <sup>3</sup>	m	m <sup>3</sup>		
1	CN2-CN3 (Chyangh Baari Nala)	652.89	585.00	585.00		585	RCC, closed			585		585	completed
2	CN2-CN3 (Chyangh Baari Nala)	132 Nos piles	138	138		138 Nos.							Piling works completed

### 3.1.3. ROADS AND LANES

Most of the roads/lanes in Biratnagar are in a poor state due to lack of periodic maintenance, and need improvement where as some of the roads are graveled and would benefit from upgrading. In the areas where drainage and sewerage works are proposed there will be significant impact on the existing roads. The Project has considered on design based on reinstatement, rehabilitation and upgrading of existing roads length 73.86 km. Some of the roads of the project has been completed and some of them are in the process of being upgraded.

Out of 73.86 km. about 45.36 Km. has been attempted for Sub Base but due to start of monsoon, asphalt work is delaying.

About 35.43 km. Asphalt work is completed. The summary of physical progress is presented below: -



**Table No:-4 PROPOSED and PHYSICAL PROGRESS of pavement works till date**

SN	Road Number	Name of Road	Length in m					Work Completed					Remarks
			Original	Revised	Progress		Total	Sub-base m	Base m	Asphalt m	RCC m	Paint m	
					Previous	This Month							
1	R42	Bhagwati Marg	218.00	218.00	218.00		218.00	218.00	123.00				
2	R5	College Road	970.00	970.00	650.00		650.00	650.00	599.20				
3	B2	Gauri Shankar Marg	2,777.83	2,777.83	2,152.00		2,152.00	2,152.00	2,152.00	210.00			
4	R65	Satghumti Marg	282.00	320.00	320.00		320.00	320.00					
5	R107		173.00	215.00	215.00		215.00	215.00					
6	R107 a		50.00	50.00	50.00		50.00	50.00					
7	R104	VIP Marg	273.00	273.00	273.00		273.00	273.00	273.00				
8	R8	Madhumara Marg	600.00	600.00	600.00		600.00	600.00	582.00				
9	B1	Kanchan Marg	1,172.94	1,173.00	1,173.00		1,173.00	1,106.00	1,106.00		1,106.00		
10	R21	Pratibha Marg	1,320.00	1,320.00	1,330.00		1,330.00	1,330.00	1,330.00		1,012.80		



SN	Road Number	Name of Road	Length in m				Work Completed					Remarks	
			Original	Revised	Progress		Total	Sub-base m	Base m	Asphalt m	RCC m		Paint m
					Previous	This Month							
11	B3	Keshaliya Marg	1,574.00	1,574.00	1,574.00		1,574.00	1,574.00	1,574.00				
12	S13		1,617.00	1,617.00	1,617.00		1,617.00	1,417.00	1,417.00			1,812.60	
13	R12	Kanchha Dai Marg	1,192.00		1,297.00		1,297.00	1,297.00	897.00				
	R12	Keshaliya south	900.00			900.00	900.00	900.00	420.00				
14	Rani site	Rani	4,023.00	4,023.00	4,023.00		4,023.00	4,023.00	4,023.00				
15	R16	Satya Marg	604.00	604.00	604.00		604.00	604.00	542.10				
16	R26	Pasang Marg	617.00	654.00	654.00		654.00	654.00	654.00				
17	R28	Pustakalaya Marg	635.00	635.00	635.00		635.00	635.00	339.20				
18	R27	Peepal Marg	810.00	810.00	734.32		734.32	734.32	734.32			639.20	
19	R25	Devi Marg	599.00	580.00	580.00		580.00	580.00	561.70				
20	R24	Prabhat Marg	384.41	380.00	518.15		518.15	518.15	518.15				
21	R37	Banglamukhi Marg	420.00	477.00	477.00		477.00	477.00	477.00				



SN	Road Number	Name of Road	Length in m				Work Completed					Remarks	
			Original	Revised	Progress		Total	Sub-base m	Base m	Asphalt m	RCC m		Paint m
					Previous	This Month							
22	R7	Manakama a Marg	814.00	814.00	542.00		542.00	542.00	242.00				
23	R30	Shanti Marg	212.00	212.00	123.10		123.10	123.10	123.10				
24	R9	Fadindra Marg	123.00	123.00	119.00		119.00	119.00	119.00				
25	S11	Samrat Marg	660.00	660.00	660.00		660.00	504.60	504.60		504.60		
26	R22	Amar Marga	373.10	367.65	367.65		367.65	367.65	367.65				
27	R29	Shanti Marg	620.00	620.00	684.70		684.70	684.70	684.70		585.60		
28	R36	Gaurav Marg	218.00	218.00	220.00		220.00	220.00	220.00		440.00		
29	R33	Tarun Marg	285.00	285.00	280.00		280.00	280.00	280.00				
30	R64	Satya Narayan Marg	121.00	121.00	121.00		121.00	121.00	-				
31	R8		-	225.00	225.00		225.00	225.00	225.00				
32	N36		-	190.00	190.00		190.00	186.95	186.95				



SN	Road Number	Name of Road	Length in m				Work Completed					Remarks	
			Original	Revised	Progress		Total	Sub-base m	Base m	Asphalt m	RCC m		Paint m
					Previous	This Month							
33	R188	Shakti Marg	-	120.00	120.00		120.00	120.00	120.00				
34	R2	Main Road	-	-	1,085.00		1,085.00	350.00	350.00		350.00		
35	T3 Line 6A	Pandit Meghnath Marg	-	220.00	220.00		220.00	220.00	220.00				
36	T2 Line 24C	Nava Jyoti Marg	-	205.00	205.00		205.00						
37	T2 Line 24D	Nava Jyoti Marg	-	210.00	210.00		210.00						
38	R63 (DSP Road)	DSP Road	420.00	420.00	420.00		420.00	395.00	395.00				
39	R90	Shakti Marg	450.00	320.00	320.00		320.00	320.00	320.00		640.00		
40	R77	Arniko Marg	80.00	80.00	80.00		80.00	80.00	80.00				
41	R76	Mitra Marg	270.00	270.00	270.00		270.00	270.00	270.00		541.20		
42	R183	Nava Jyoti Marg	240.00	240.00	240.00		240.00	220.00	220.00				
43	T1 L16B	Xenial Front	210.00	210.00	210.00		210.00	205.00	205.00				



SN	Road Number	Name of Road	Length in m				Work Completed					Remarks	
			Original	Revised	Progress		Total	Sub-base m	Base m	Asphalt m	RCC m		Paint m
					Previous	This Month							
44	T1L16A	Xenial South	140.00		180.00		180.00	180.00	180.00	180.00			
45	R114	Dharanidhar Marg	560.00	560.00	560.00		560.00	560.00	560.00	560.00		560.00	
46	R113	Kavi Lekh Marg	740.00	740.00	740.00		740.00	740.00	740.00	740.00			
47	R5a		370.00	370.00	370.00		370.00	370.00	370.00	370.00			
48	Rani site B		600.00	520.00	520.00		520.00	520.00	520.00	520.00			
49	R3	Dharamban Marg	-	2,230.00	2,233.00		2,233.00	2,233.00	2,150.30	2,150.30		2,080.30	
50	R78	Sombare - Highway	92.00	92.00	92.00		92.00	92.00	92.00	92.00			
51	R84	West of school	673.00	235.00	473.20		473.20	473.20	236.00	236.00			
52	R85	Machha Line	153.00		160.00		160.00	160.00	160.00	160.00			
53	R87	Mahabir Chowk	150.00	148.00	148.00		148.00	148.00	110.00	110.00			
54	R86	Petrol pump side -R12			293.00		293.00	293.00	293.00	293.00			
55	R11	R18/R86	281.00	281.00	281.00		281.00	281.00	205.00	205.00			



SN	Road Number	Name of Road	Length in m				Work Completed					Remarks	
			Original	Revised	Progress		Total	Sub-base	Base	Asphalt	RCC		Paint
					Previous	This Month		m	m	m	m		m
56	N3	Jatuwa	120.00	117.00	117.00		117.00						
57	N4	Jatuwa	170.00	168.00	168.00		168.00	168.00	168.00	168.00			
58	R10	Ram Marga	1,092.00	1,092.00	292.00		292.00	292.00	292.00	292.00		853.20	
59	T2L26F	APF	61.50	61.50	55.00		55.00						
60	T2L27		80.00	80.00	80.00		80.00	80.00	80.00	80.00			
61	R122		265.55	265.55	265.55		265.55	265.55	265.55	265.55		497.40	
62	N9		220.42	220.42	220.42		220.42	220.42	220.42	220.42			
63	R17		610.06	610.06	365.00		365.00	365.00	365.00	365.00		730.00	
64	R18		465.78	465.78	370.00		370.00	370.00	370.00				
65	N2		75.84	75.84	75.84		75.84	75.84					
66	T3L6	Moti marga			170.00		170.00	170.00	170.00	170.00			
67	T3L6	Elite club - CDO Office			107.00		107.00	107.00					



SN	Road Number	Name of Road	Length in m				Work Completed					Remarks	
			Original	Revised	Progress		Total	Sub-base	Base	Asphalt	RCC		Paint
					Previous	This Month		m	m	m	m		m
68	T3L6	Balmandir - Ganesh Mandir			380.00		380.00	380.00					
69	T3L6	CDO Office front			49.40		49.40	49.40					
70	T3L6A	Golchha Marga			220.00		220.00	220.00	220.00	220.00			
71	T3L23	Madhumara road			541.00		541.00	541.00	541.00	541.00		358.40	
72	R45	Bata road			505.00		505.00	505.00	295.00	295.00			
73	T3L21				400.00		400.00	400.00	400.00	400.00		774.00	
74	N5				70.00		70.00	70.00	70.00	70.00		122.00	
75	T3L39				400.00		400.00	400.00	400.00	400.00		491.00	
76	T3L39A				130.00		130.00	130.00	130.00	130.00		179.40	
77	T3L39B				80.00		80.00	80.00	80.00	80.00		117.60	
78	R68 - T2L24G				220.00		220.00	220.00					



SN	Road Number	Name of Road	Length in m				Work Completed					Remarks	
			Original	Revised	Progress		Total	Sub-base	Base	Asphalt	RCC		Paint
					Previous	This Month		m	m	m	m		m
79	N10				194.00		194.00	194.00					
80	T3L24C				170.00		170.00	170.00					
81	T3L9				278.00		278.00	278.00					
82	R6				1,228.20		1,228.20	1,228.20	1228.20	1228.20			
83	N24				136.00		136.00	136.00	136.00	136.00			
84	R31				188.70		188.70	188.70	188.70	188.70			
85	Bindabas ini Marga				352.28		352.28	352.28	352.28	352.80			
86	Bhattimo de to Hartaliha at				166.50		166.50	166.50	166.50	166.50			
87	R73				217.00		217.00	217.00	217.00	217.00			
88	R6	Bata Galli			269.00		269.00	269.00	269.00				
89	R9 (R41- R7)				194.80		194.80	194.80	194.80				



SN	Road Number	Name of Road	Length in m				Work Completed					Remarks	
			Original	Revised	Progress		Total	Sub-base	Base	Asphalt	RCC		Paint
					Previous	This Month		m	m	m	m		m
90	R44	Thakur Bari Road			357.50		357.50	357.50					
91	R102	Main			140.00		140.00	140.00	140.00				
92	R102	Branch			71.30		71.30	71.30					
93	R103				170.40		170.40	170.40					
94	R32				188.00		188.00	188.00	188.00	188.00			
95	T2L18Y				116.20		116.20	116.20					
96	R20				108.00		108.00	108.00					
97	R82	Everest School			530.00		530.00	530.00	530.00				
98	T1L5				140.00		140.00	140.00	140.00				
99	T3L23C	Jay Nepal			220.20		220.20	80.00	75.00				
100	T3L25B				195.00		195.00	195.00					



SN	Road Number	Name of Road	Length in m					Work Completed					Remarks
			Original	Revised	Progress		Total	Sub-base m	Base m	Asphalt m	RCC m	Paint m	
					Previous	This Month							
101	T3L25C				140.00		140.00	140.00					
102	R3	T3 Trunk			465.00		465.00	465.00					
103	Nag Mandir to R3				55.00		55.00	55.00	55.00	55.00			
104	R75				130.00		130.00	130.00	130.00	130.00			
105	R43					250.00	250.00	250.00					
	<b>Total</b>		<b>33,228.43</b>	<b>33,733.63</b>	<b>40,656.81</b>	<b>4,852.60</b>	<b>45,509.41</b>	<b>45,369.21</b>	<b>39,575.22</b>	<b>35,431.14</b>	<b>210.00</b>	<b>14,395.30</b>	



**Table No:-4.1 Footpath (Work Progress till date)**

SN	Road Number	Name of Road	Type*	Category		Length in m					Footpath		Remarks
				<3m	>3m	Original	Revised	Progress		Cumulative	m	m <sup>2</sup>	
								Previous	This Month				
1	B2	Gauri Shankar Marg	Precast block			2,777.83	2,777.83	1,700.00		1,700.00	1,700.00	3,888.96	
2	S11	Bhatta Chowk to Sankhar Chowk	Precast block			900.00	900.00	300.00		300.00	300.00	270.00	
3	B3 (3)	Keshaliya Road	Precast block					500.00		500.00	500.00	1,200.00	
4	R16	Jatuwa	Precast block					400.00		400.00	400.00	440.00	
5	R21		Precast block					280.00		280.00	280.00	280.00	
6	Rani		Precast block					850.00		850.00	850.00	510.00	
7	R6	Pratibha to pipal chowk	Precast block					154.00	400.00	554.00	554.00	277.00	



**Table No:-4.2 Road improvement Works (Work Progress till date)**

SN	Description	Unit	Proposed	Total Up to Previous Month	This Month	Total Up to this Month	Progress
1	Subgrade	m	73,860.00	44,359.41	1,150.00	45,509.41	61.62%
2	Sub Base	m	73,860.00	44,219.21	1,150.00	45,369.21	61.43%
3	Base	m	73,860.00	38,242.22	1,333.00	39,575.22	53.58%
4	Prime/Tack	m	73,860.00	34,530.14	901.00	35,431.14	47.97%
5	Asphalt	m	73,860.00	34,530.14	901.00	35,431.14	47.97%
6	Paint	m	73,860.00	14,395.30	-	14,395.30	19.49%



### 3.1.4. ROAD SIDE DRAIN

Most of the roads under this project for upgrading is without drain or existing drain are in poor condition, on instruction from the employer at various stretches the construction works were ongoing and some of them have been completed. The project has provisioned drain at both sides or one side as per the RoW of the road. The contractor has already started drain works at many locations. The progress for the drain works is listed below:

**Table No:-4a PROPOSED and PHYSICAL PROGRESS of Road side drain works till date.**

SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick m	RCC m	
			Previous	This Month				
1	B1	Kanchan Marg	90.00		90.00	90.00		
2	R29	Shanti Marg	256.52		256.52	256.52		
3	N36		185.88		185.88	185.88		
4	R8		219.83		219.83	219.83		
5	R7	Devi Marg and Pipal Marg	89.58		89.58	89.58		
6	R63	DSP Road	418.79		418.79	418.79		
7	R9	Baglamukhi path	103.20		103.20	103.20		
8	S13	Udaya Marga	158.10		158.10	158.10		
9	N33		70.00		70.00	70.00		
10	R28	Pustakalaya Marg	278.00		278.00	278.00		
11	R90	Shakti Marg	313.25		313.25	313.25		



SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick m	RCC m	
			Previous	This Month				
12	R114	Dharanidhar Marg	312.33		312.33	312.33		
13	R11	Om Shiv Marg	225.17		225.17	225.17		
14	R18		381.50		381.50	381.50		
15	R17		75.00		75.00	75.00		
16	R113	Kavi Lekhnath Marg	72.45		72.45	72.45		
17	R77	Arniko Marg	80.00		80.00	80.00		
18	R76	Mitra Marg	270.00		270.00	270.00		
19	N9	Devi Marga	22.70		22.70	22.70		
20	N4		146.38		146.38	146.38		
21	R33	Tarun Marg	264.48		264.48	264.48		
22	R36	Gaurav Marg	216.45		216.45	216.45		
23	R86	Janpath Marg	187.55		187.55	187.55		
24	R183	Nava Jyoti Marg	211.05		211.05	211.05		
25	R7a		65.00		65.00	65.00		



SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick m	RCC m	
			Previous	This Month				
26	Rani site	Rani B	530.00		530.00	530.00		
27	Rani site	Rani A	270.00		270.00	270.00		
28	N3		110.00		110.00	110.00		
29	N5		65.00		65.00	65.00		
30	R21	Binayak Marga	388.25		388.25	388.25		
31	R2	Main Road	1,972.50	20.00	1,992.50	1,992.50		
32	T1L16B	Xenial Front	205.68		205.68	205.68		
33	T1L16A	Xenial South	150.20		150.20	150.20		
34	R75	Tintoliya Marga	127.50		127.50	127.50		
35	R122	Amar Marga	250.48		250.48	250.48		
36	R18 Branch		30.00		30.00	30.00		
37	R7(b)(Neuro to sidhartha chowk)	Siddhartha Marga	330.00		330.00	330.00		
38	R12	Sukra Path	290.00		290.00	290.00		
39	R42	Jahada Marga	171.00		171.00	171.00		



SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick m	RCC m	
			Previous	This Month				
40	R6	Shahi Marg	760.00		760.00		760.00	
41	R21(a)	DharamBadh Junction	80.00		80.00	80.00		
42	R78	Binayak Marga	70.00		70.00	70.00		
43	R188	Shakti Marg	115.60		115.60	115.60		
44	R40	Brahma Kumari Marga	350.00		350.00	350.00		
45	Rani Site C		97.50		97.50	97.50		
46	Ranit Site D		131.45		131.45	131.45		
47	T3L21	Moti Marga	360.95		360.95	360.95		
48	T3L39	Gaheli Marga	270.00	70.00	340.00	340.00		
49	T3 Line 39A		90.00		90.00	90.00		
50	T3 L39B		90.00		90.00	90.00		
51	T2L27	Bhumi Prashasan Junction	79.50		79.50	79.50		
52	T4 Line 1	Sailesh Marg	100.00		100.00	100.00		
53	N2		95.00		95.00	95.00		



SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick m	RCC m	
			Previous	This Month				
54	T2 Line 26E	College Road	90.00		90.00	90.00		
55	T2 Line 18C	Maisthan Marga	102.00		102.00	102.00		
56	T2Line 18A	Makalu Marga	60.00		60.00	60.00		
57	R6 (T3L11i)		247.50		247.50	247.50		
58	R9 (T3L11k)	Tathasthu Marga	180.00		180.00	180.00		
59	R45 (T3Line10D)	Dadhiram Marga	260.00		260.00	260.00		
60	R9, T2 L19	Fanindra Marga	320.00	60.00	380.00	380.00		
61	R7c (Neuro to Shanti Chowk)	Siddhartha Marga	305.00		305.00	305.00		
62	R84	School Marga	663.00		663.00	663.00		
63	R85	Lekhanath Marga	150.00		150.00	150.00		
64	R87	Byas Marga	150.00		150.00	150.00		
65	Rani B (Bus park)		90.00		90.00	90.00		
66	R8(a)	Madhumara Marg	285.00		285.00	285.00		
67	T3L23A		100.00		100.00	100.00		



SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick m	RCC m	
			Previous	This Month				
68	Rani E		85.00		85.00	85.00		
69	R102	Hamro Marg	132.50		132.50	132.50		
70	R10/R10a	Ram Marga	740.36		740.36	740.36		
71	N10	APF	150.00		150.00	150.00		
72	R23	Bani Marg	200.00		200.00	200.00		
73	R103	Vibuti Marga	162.50		162.50	162.50		
74	T3L6	Sahid Marga	350.00		350.00	350.00		
75	P1, T3L6A	Pandit Meghnath Marga	260.00		260.00	260.00		
76	T2 L24C & D	Hanuman Das Marga	130.00		130.00	130.00		
77	R99	APF	187.00		187.00	187.00		
78	T2 L25		150.00		150.00	150.00		
79	R20		60.00		60.00	60.00		
80	T2L24F		60.00		60.00	60.00		
81	R105		150.00		150.00	150.00		



SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick m	RCC m	
			Previous	This Month				
82	R34	Prabhu Marg	158.35		158.35	158.35		
83	R35	Garima Marg	138.00		138.00	138.00		
84	R107		160.00		160.00	160.00		
85	T3L13D		70.63		70.63	70.63		
86	T3L13E		62.40		62.40	62.40		
87	T3L11E		110.00		110.00	110.00		
88	B2		76.50		76.50	76.50		
89	R78		35.00		35.00	35.00		
90	R7b		288.50		288.50	288.50		
91	T3L21A		25.00		25.00	25.00		
92	R74		96.00		96.00	96.00		
93	R46		120.00		120.00	120.00		
94	R101		160.00		160.00	160.00		
95	T3L7A		125.00		125.00	125.00		
96	T3L8		75.00		75.00	75.00		



SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick m	RCC m	
			Previous	This Month				
97	R20		100.00		100.00	100.00		
98	R5		200.00		200.00	200.00		
99	R67		110.00		110.00	110.00		
100	R82		350.00		350.00	350.00		
101	T1L13A		100.00		100.00	100.00		
102	T1L14A		150.00		150.00	150.00		
103	R68		200.00		200.00	200.00		
104	T3L22A		300.00	35.00	335.00	335.00		
105	T3L22B		120.00		120.00	120.00		
106	T3L25C		130.00		130.00	130.00		
107	T3L11B		60.00		60.00	60.00		
108	T3L11M		50.00		50.00	50.00		
109	R106		70.00		70.00	70.00		
110	R41		520.00		520.00	520.00		
111	T2L19B		110.00		110.00	110.00		



SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick m	RCC m	
			Previous	This Month				
112	R30		180.00		180.00	180.00		
113	T3L13C		150.00	75.00	225.00	225.00		
114	T3L13J		72.53		72.53	72.53		
115	T2L18Y		100.00		100.00	100.00		
116	T2L19P		114.38		114.38	114.38		
117	T2L19Q		126.55		126.55	126.55		
118	R9A		208.73		208.73	208.73		
119	R9B		25.00		25.00	25.00		
120	T3L7	Sahid Marga	355.00		355.00	355.00		
121	T2L18K		40.00		40.00	40.00		
122	T3L23C		105.00		105.00	105.00		
123	T2L24E	Mahabir Marga	60.00		60.00	60.00		
124	R44		390.00		390.00	390.00		
125	R110		150.00		150.00	150.00		
126	Parichaya Marga		130.00		130.00	130.00		



SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick m	RCC m	
			Previous	This Month				
127	T3L25B		200.00		200.00	200.00		
128	T1L5, 5A		590.00		590.00	590.00		
129	R82		110.00		110.00	110.00		
130	T2L19Y		150.00		150.00	150.00		
131	T3 Trunk	Sahid & Sanihat Marga	520.00		520.00	520.00		
132	T2L19F		55.00		55.00	55.00		
133	T2L18D		20.00		20.00	20.00		
134	R19		175.00		175.00	175.00		
135	R83	Shiva Marga	125.00		125.00	125.00		
136	T310B, T3L7D (R46)	Rangeli Road	320.00		320.00	320.00		
137	T3L19G		30.00	15.00	45.00	45.00		
138	R4	Jatuwa Marga	25.00		25.00	-	25.00	
139	T3L22	Rangeli Road		25.00	25.00	25.00		
140	T3L25B, Outlet	Madhumara		96.00	96.00	96.00		



SN	Road Number	Name of Road	Length in m		Total	Work Completed		Remarks
			Progress			Brick	RCC	
			Previous	This Month		m	m	
141	T3L7B	Matrika Marga		75.00	75.00	75.00		
	<b>Total</b>		<b>26,911.19</b>	<b>471.00</b>	<b>27,382.19</b>	<b>26,597.19</b>	<b>785.00</b>	<b>105.11%</b> wrt estimated length in BOQ



### 3.2. ENVIRONMENTAL ASPECT

The environment has been defined to mean surrounding area including human and natural resources to be affected by execution and after completion of works. The Contractor shall take all precautions for safeguarding the environment during the course of the construction of the works. He shall abide by all prevalent laws, rules and regulations governing pollution and environmental protection mitigation measure specified in the latest publication of “Environmental Management Guidelines” published by the GoN and Projects Environmental management plan.

The Contractor shall prohibit employees from unauthorized use of explosives, poaching wildlife and cutting trees. The contractor shall be responsible for the action of his employees. Environmental protection works, among others, shall also include the following.

#### 3.2.1. BORROW/ QUARRY SITES

The engineer shall have the power to disallow the method of construction and / or the use of borrow or quarry area, if in this opinion, the stability and safety of the works or any adjacent structure is endangered, or there is undue interference with the natural or artificial drainage or the method or use of area will promote undue erosion.

Since the contractor has made agreement with the owner of crusher plant for the supply of required materials from the crusher, no approval for quarry and borrow sites are required till date.

#### 3.2.2. DISPOSAL OF SPOIL AND CONSTRUCTION WASTE

Material excess of the requirements for permanent works and unsuitable materials shall be disposed off in location and in the manner as agreed with the Engineer. The location of disposal site shall be such as not to promote instability, destruction of properties and public service system. Exposed area of such disposal site shall be suitably dressed and be planted with suitable vegetation.

The contractor has already provided the safe tipping sites and the excess materials are dumped as per the approved tipped sites. Spoil and construction wastes are disposed at Madhumara site similarly excess construction materials are stocked at Madhumara site and at the open space of north side of Degree College (Rani Site).

##### **Provision for maintenance of Camps/Office/Stores/Equipment.**

This section describes about the works related to maintenance and upgrading of labor camps, contractor's employees camp, contractor's site office, contractor's equipment store yards, contractor's equipment store yards, contractor's precast production yards. The camp should have the proper roofing system. Besides that, it should be spacious, should have proper circulation of the fresh air, should be hygienic, and should have proper electric lightening system & water supply system. It should be neat and clean.

Labor camps are provided at various locations as per requirement and these sites are frequently visited and monitored. The condition is found to be satisfactory. The details of the labor camp is provided in annex.



### **3.2.3. PROVISION AND MAINTENANCE OF TOILETS**

Provision of toilets for labor and employees shall be made to avoid public nuisance as well as pollution of water courses and air. The Contractor shall construct suitable septic tanks and soak pit along with rooms for pit type latrines. Sufficient water must be provided and maintained in the toilets.

Toilets have been provided at each labor camp. The contractor has been instructed to improve the toilet conditions where required.

The numbers of toilets in each camp is also attached hereby in annex. Toilets in all the camps are found to be in the acceptable condition.

### **3.2.4. CRUSHING PLANTS**

Crushing plants shall be located away from the population centers, water intakes, and should not disturb the sensitive echo system. Suitable dust control device should be fitted with crusher to control emission of dust from plant. The crusher plant is located at around 42 km north-east of Biratnagar at a place called Chis yang.

Since the contractor has made agreement with the owner of crusher plant for the supply of required materials from the crusher, no approval for quarry and borrow sites are required till date certainly minimize the dust pollution.

### **3.2.5. ASPHALT PLANTS AND BATCHING PLANTS**

Hot mix plant and batching plant shall be located away from the population centers. The Contractor shall take every precaution to reduce levels of noise, vibration, dust and emission from his plants. No Bituminous material shall be discharged in to drains, nearby trees vegetation; property shall be protected during spray of bitumen etc.

As the concrete quantity of the project is very minimal, there is no need of the separate batch plant for concrete mixing. However, as there are a lot of asphalt concrete works to be done in the project, a separate asphalt plant has been installed, especially for the project, at around 6 Km south of the Biratnagar DSC office at a place called Rani.

### **3.2.6. OCCUPATIONAL HEALTH AND SAFETY MEASURES**

The contractor shall provide personnel protective equipment (PPE) (Helmet, Boots, masks, gloves, jacket, protective glasses etc.) to use. Public notification, safety and warning signs and informative signboards in working sites for work safety shall be provided. The DSC engineer and DSC Environmental safeguard expert supervise and monitor the use of PPEs and other necessary safety measures regularly.

The project is the environmental improvement project and mainly constitutes sewerage and drainage improvement works in BMC besides others. As per ADB guide-lines on Environmental Assessment requirements, this project is classified as Environment Category B. According to Environmental Protection Regulation-2054BS, First Revised (2055 BS) schedule-3, IEE is required for Operations of Sewerage Schemes under Schedule 1.h.2.e (pertaining to Rule3). The final report was submitted to MoUD on 14th May, 2013 and has already been approved.

Installation of functioning sewers and functioning drainage system including roads/lanes improvement in BMC does not possess any adverse environmental impacts to its surrounding. In fact, these will greatly enhance the living conditions/hygiene of the in habitants and facilitate transportation. Nevertheless, it is imperative to look into positive as well as negative impacts of such infrastructure development works in the urban area.



Training and awareness program regarding health, safety and disease at Labour camps and yards on 3 and 4 March 2018 by Safety Prevention Officer Er. Dhiraj Sardar.

A regular monitoring visit by DSC was carried out and a standard site specific environmental monitoring checklist was used to record the present status of the project to verify if work has been done as per EMP Guidelines. A sample of environmental checklist is attached herewith as Annex.



### 3.3. SOCIAL ASPECT

Regional Urban development Project (RUDP) in Biratnagar has implemented to improve the quality of life and help to achieve higher and more socially inclusive economic growth of people through effective, efficient, and reliable delivery of improved and affordable municipal services. Infrastructure development of drainage and sewerage system as well as roads and lane improvement are the major components of RUDP in Biratnagar Metropolitan City (BMC). Establishment and functioning of Social Safeguard Desk in PIU is a major milestone of social development aspect which has been effective to address all social/community development issues and concerns with active initiation of the DSC. Local labors have been deployed in civil construction works (i.e. in Road side drain / Sub grading works). The Engineer has issued the format of Social Safeguard Monitoring plan which is attached here with.

### 3.4. SAFEGUARD/ GESI COMPONENT

#### **3.4.1. COMMUNITY AWARENESS:**

Conduct regular Community Awareness Consultations within Project Areas to build awareness on Project Objectives, Activities and implementation during site observation, Monitoring and Meetings. Different site visit has been conducted during May, 2018 such as DDC Pre cast yard, Chyangbari Naala Biratnagar-16, Asphalt work at Sai Marg, Sewer Line construction work at Hanumandas Road and Asphalt Plant at Rani Site. Except of Minor, no any major conflict has been found during construction work. The visit was conducted jointly with Environment Safeguard Expert and Social Safeguard Expert. Before commissioning of any works at any stretches, we paste the information templates at certain interval and provide sufficient information to the users regarding it.

#### **3.4.2. GRIEVANCE REDRESSES MECHANISM:**

Although many grievances were received verbally, only 9 (Nine) grievances have been registered formally which have immediately been addressed and resolved. This month, some grievances for some stretches were received verbally and were addressed immediately. Refer semi - annual report for details.

#### **3.4.3. GENDER EQUITY AND SOCIAL INCLUSION (GESI):**

Activities related to GESI has been monitored and supervised in all Construction sites. During site visit female workers were found in significant minority (7 numbers) at Construction sites, thus Contractor was instructed as follow:

- i. Encourage to Local female Employment as Labor and skilled man power.
- ii. Manage separate Camp and necessary facilities for female workers to encourage of female Employment.

Camps and construction sites are regularly been monitored to find the status of working force.



### 3.4.4. STATUS OF SOCIAL AND ENVIRONMENTAL SAFEGUARD MEASURES

The present status to this regard has been reported as below:

During the site visit for Socio Environment monitoring by DSC Environmental and Social Safeguard Expert on date 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> December, 2018 following issues were found. Social Safeguard revisited the site on 29<sup>th</sup>, 30<sup>th</sup> and 31<sup>st</sup> December.

- i. Efforts are being made to control dust emission at construction site by sprinkling water. As personal safety was given prime importance, construction workers were made to use helmet, globe and jacket while on the construction site.
- ii. Besides that, special attentions were given on the placement of safety board and traffic signboards, safety tools, barricades, tapes, etc. and special care were taken to make sign boards big enough to make them visible from distant.
- iii. Taking into consideration of the fact that the involvement of the significant numbers of female as employee in ADB project is the main project objective of ADB, contractor paid especial attention to have a separate toilet and separate labor camp for female that facilitates and encourages female to get work in the construction field.
- iv. Significant improvement was found to be done in health and sanitation issues in the labor camp than in the previous monitoring visit; like, quality and quantity of drinking water was improved and condition of toilet was found to be enhanced. However, to meet the sanitation condition to predetermined level, further instructions were given by contractor to make provision for sufficient water in toilet and soap for hand-wash. Furthermore, yard in charge was suggested to have sufficient medications, bandages and other necessary first aid equipment's.

The implementation of Social and Environmental Safeguard measures during this month was found partially satisfactory.

### 3.4.5. STATUS OF RELOCATION OF SERVICES

Relocation of water supply pipe lines were ongoing at T3L39, T3L39A, T3L39B, T3L23C, T3L10, R44, R2, B1 & T3 Trunk, etc. & some of them are almost completed and where required the supply has been providing temporarily as per site condition.

**Table – 5: Status of Labor at Site**

Labour class	Labour		Composition		Ethnic composition				
	Skilled	Unskilled	Male	Female	Janjati	Dalit	Muslim	Madhesi	Brahmin/Chhetri
Local	10	21	31	0	0	4	0	27	0
Non local	37	116	153	0	39	30	6	78	0
Indian	2	8	10	0	0	0	1	9	0
<b>TOTAL</b>	<b>49</b>	<b>145</b>	<b>194</b>	<b>0</b>	<b>39</b>	<b>34</b>	<b>7</b>	<b>114</b>	<b>0</b>



### 3.5. FINANCIAL PLAN

The Sub-project cost will be disbursed in three years starting from FY2074/2075 to 2076/2077

#### 3.5.1. DISBURSEMENT RECORDS IN CONSTRUCTION

**Table – 6: DISBURSEMENT RECORDS in CONSTRUCTION**

S. No.	Description	Submission date	Covering date	Submitted Amount(NRs)	Remarks
1	IPC 01	15 <sup>th</sup> October 2017		339,105,000.00	Mobilization Advance
2	IPC 02	2 <sup>nd</sup> April 2018	2nd November 2017 to 31st March 2018	261,501,492.21	
3	IPC 03	1 <sup>st</sup> July 2018	1st April 2018 to 30th June 2018	316,582,708.58	
4	IPC 04	1 <sup>st</sup> October 2018	1st July 2018 to 31st September 2019	105,227,887.16	
5	IPC 05	2 <sup>nd</sup> December 2018	1st October 2018 to 30th November 2018	95,951,603.44	
6	IPC 06	31 <sup>st</sup> January 2019	1st December 2018 to 31st January 2019	264,937,394.98	
7	IPC 07	12 <sup>th</sup> April 2019	1st February 2019 to 31st March 2019	308,805,662.97	
8	IPC 08	9 <sup>th</sup> May 2019	1st April 2019 to 30th April 2019	106,210,198.68	
9	IPC 09	10 <sup>th</sup> June 2019	1st May 2019 to 31st May 2019	90,419,375.33	
10	IPC 10	11th July 2019	1st June 2019 to 30th June 2019	67,863,056.59	
<b>Total amount excluding PA &amp; Mobilization advance till date =</b>				<b>1,617,499,379.94</b>	



## 4. OBJECTIVES AND SCOPE OF WORKS

### 4.1. OBJECTIVES

The following are the expected physical infrastructure improvement outputs of the project in Biratnagar:

- Drainage and sewerage systems improvement.
- Urban roads and lanes improvement.

Reference to the deliverables identified in the Project, indicates that there are a number of deliverables related specifically to the design aspects of the above infrastructure improvements with construction works.

### 4.2. SCOPE OF WORKS

The scope of works for consultant's services is fairly detailed in the TOR attached with contract Agreement. The main points are summarized below:

- Detailed Design and Procurement Assistance Phase for integrated solid waste management design (ISWM)
- Monthly progress report and quarterly progress report.
- Semi- annual Environmental monitoring report.
- Semi-annual Safeguard monitoring report.
- Annual progress report including annual Environmental / Social safeguard monitoring report, assets.
- Detailed draft final report for our puts, including to assist the PIU (Employer), status of all supervision and construction works issues, all deliverables under the contacts.
- Sub project completion report, and summary of all other reports, progress and issues under the project.

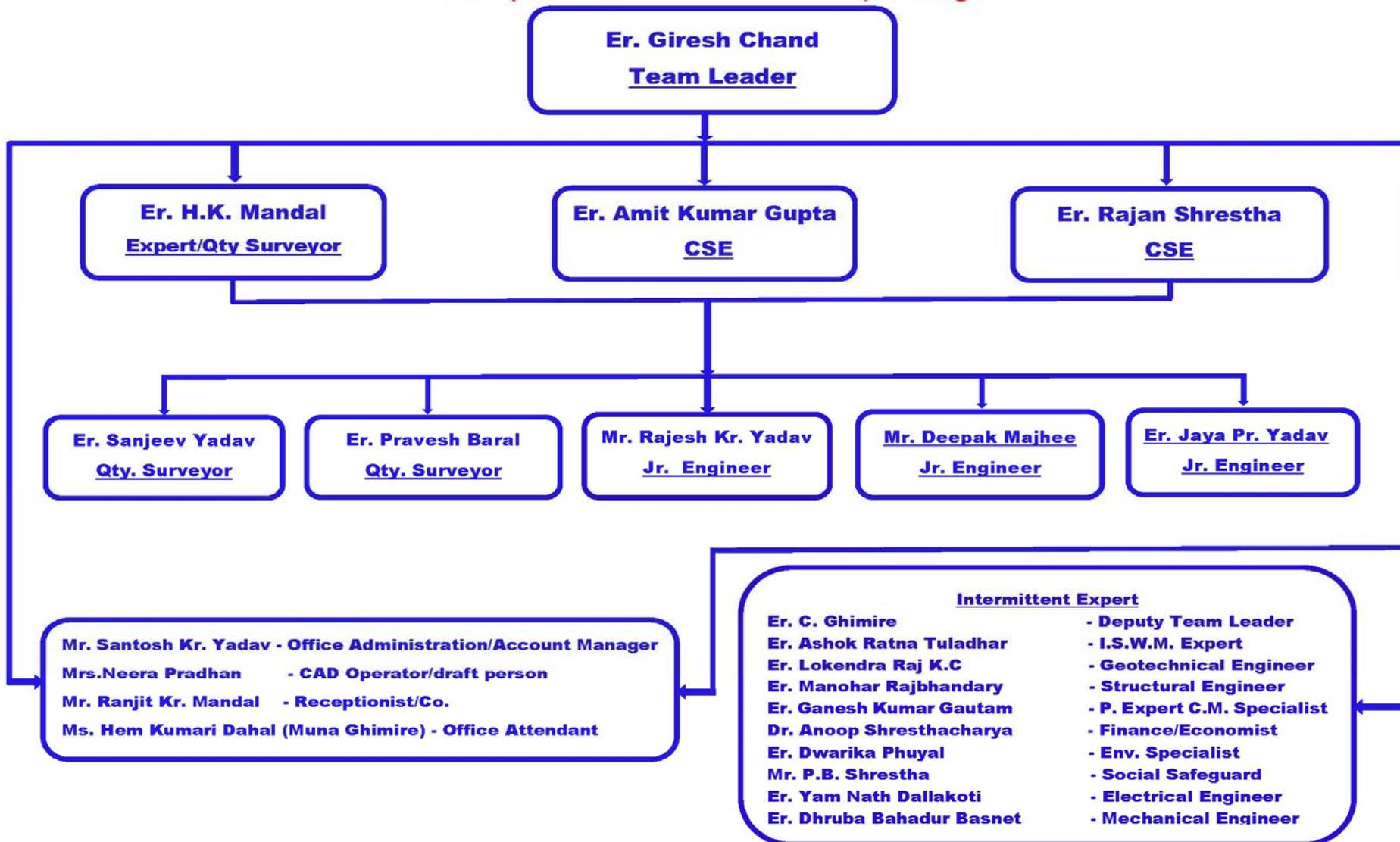


#### 4.3. ORGANIZATION AND STAFFING

Attached



**ORGANIZATION CHART**  
**RUDP (ADB Loan No - 47252 Site Office, Biratnagar)**



#### 4.4. CONSULTANT’S ACTIVITIES IN CONSTRUCTION PHASE

The current staffing of the consultant at project site is as follows:

**Table 7: CONSULTANT’S STAFF at Project Site, Biratnagar**

SN	Name	Designation	Joining date	Remarks
1	Mr. Giresh Chand	Team Leader	6 <sup>th</sup> Sep 2017	
2	Mr. Ashok Ratna Tuladhar	ISWM ( Designer)	6 <sup>th</sup> Sep 2017	Intermittent
3	Mr. Dwarika Phuyal	Environmental Safeguard Expert	1 Nov 2017	Intermittent
4	Mr. Prakash Bhakata Shrestha	Social Safeguard Monitoring Expert	26 <sup>th</sup> dec-2017	Intermittent
5	Mr. Hare Krishna Mandal	Expert/Quantity surveyor	1 <sup>st</sup> Nov 2017	
6	Mr. Amit Kumar Gupta	Construction Supervision Engineer	1 <sup>st</sup> March 2018	
7	Mr. Rajan Shrestha	CSE/Quantity Surveyor	7 <sup>th</sup> Nov 2017	Working as CSE from 1 <sup>st</sup> May 2019.
8	Mr. Rajesh Kumar Yadav	Junior Engineer-1	6 <sup>th</sup> Sep 2017	
9	Mr. Sanjeev Yadav	Qty. Surveyor	5 <sup>th</sup> Nov 2017	
10	Mr. Santosh Kumar Yadav	Office Administration/Account Manager	6 <sup>th</sup> Sep 2017	
11	Mr. Hem Kumari Dahal (Muna Ghimire)	Office Attendant	6 <sup>th</sup> Sep 2017	
12	Mr. Ranjit Kumar Mandal	Receptionist	10 <sup>th</sup> Dec 2017	
13	Mr. Pravesh Baral	Junior Engineer-2	10 <sup>th</sup> Dec 2017	
14	Mr. J.P Yadav	Junior Engineer-3	1 <sup>st</sup> March 2018	
15	Mr. Deepak Majhi	Junior Engineer-4	1 <sup>st</sup> March 2018	
16	Mrs. Neera Pradhan	CAD operator/Draft Person	10 <sup>th</sup> Dec 2017	
17	Mr. Yubraj Poudel	Driver	10 <sup>th</sup> Feb-2019	



The consultant has been constantly supervising the contractor's work in daily basis. The consultant is mainly focusing in construction management, contract administration and the following activities but not limited as listed below:

- i. Daily Construction supervision/Surveying works etc.
- ii. Quality control, cost control and time control
- iii. Measurement and Certification of Interim Payment Certificates (IPC)
- iv. Modification and design of Road side drain, storm drainage and sewer lines, manholes etc. as per site condition and approve working drawings as discussed/advised by employer.
- v. Supervise construction material testing and sampling
- vi. Monitor Environment Management Plan and its compliance
- vii. Monitor Social safeguard and Resettlement Plan and its compliance
- viii. Prepare Due Diligence Report of the Project
- ix. Maintain correspondences with the Employer and the Contractor
- x. Assisting PIU



## 5. PROGRESS OF SUB – PROJECT COMPONENTS

### 5.1. CONSTRUCTION MATERIALS.

Before using any construction material in the project, as per clause 7.3, engineer gave prior notice to contractor for joint inspection of the construction materials and all materials have been jointly checked and verified. Team leader issued letter to contractor to do the lab test of the construction materials from the authorized organizations and lab reports of the tested materials have been submitted by contractor. Engineer has emphasized on the production of the pre-cast item like (Kerb stone, drain cover slab, manhole etc.) for better work progress of the project. The Contractor has established two production yards for pre-cast item (Kerb stone, drain cover slab, sewer precast elements, etc.) and production is going on.

The Contractor has informed to borrow RCC NP-3 pipes from Itahari Hume pipe factory or other location and also requested for three Edge bearing test. It has been tested in presence of consultant TL/PIU and contractor representative.

### 5.2. PROGRESS ACHIEVED TILL DATE

Month	Target This Month		Achievement This Month		Leading		Lagging		Remarks
	Monthly	Accumulated	Monthly	Accumulated	Monthly	Accumulated	Monthly	Accumulated	
July-18	0.15%	25.17%	0.78%	25.18%	0.63%	0.01%		NA	Leading
August-18	0.15%	25.32%	2.32%	27.50%	2.17%	2.18%		NA	Leading
September-18	5.71%	31.03%	1.22%	28.72%	NA	-2.31%		-2.31%	Lagging
October-18	7.72%	38.75%	2.30%	31.03%	NA	-7.72%		-7.72%	Lagging
November-18	7.72%	46.47%	5.20%	36.22%	NA	-10.25%		-10.25%	Lagging
December-18	7.95%	54.41%	3.40%	39.62%	NA	-14.79%		-14.79%	Lagging
January-19	7.96%	62.37%	5.65%	45.27%	NA	-17.10%		-17.10%	Lagging
February-19	7.96%	70.33%	5.11%	50.38%	NA	-19.95%		-19.95%	Lagging
February-19 (after Revision)	5.33%	50.03%	5.11%	50.38%	NA	0.35%		NA	Leading
March -19	7.75%	57.77%	7.84%	58.21%	NA	0.44%		NA	Leading
April-19	6.82%	64.59%	4.53%	62.74%	NA	-1.85%		-1.85%	Lagging
May-19	6.49%	71.08%	4.54%	67.28%	NA	-3.80%		-3.80%	Lagging



Month	Target This Month		Achievement This Month		Leading		Lagging		Remarks
	Monthly	Accumulated	Monthly	Accumulated	Monthly	Accumulated	Monthly	Accumulated	
June-19	3.95%	75.03%	2.05%	69.33%	NA	-5.70%		-5.70%	Lagging
July-19	3.90%	78.93%	2.19%	71.52%	NA	-7.41%		-7.41%	Lagging

### 5.3. KEY EVENTS

The consultant has noted the following key dates for the month of **July**, 2019.

**Table 8: KEY DATES of EVENTS / ACTIVITIES**

S. No.	Date	Activities/Events	Remarks
1		Frequent visit of sites by the representatives of the employer.	
2	23 <sup>rd</sup> – 26 <sup>th</sup> July 2019	Site visited by Mr Indu Dhakal, Project Monitoring Engineer, ADB consultant.	STIUEIP & RUDP both.
3	28 <sup>th</sup> July 2019	Meeting held at PIU in the presence of Mayor, Mr. Bhim Parajuli	Minutes of meeting No.:- 26

**Note:** *Due to rainy season, the work progresses are very slow.*



## 6. DETAILS OF PRE CAST ACTIVITIES.

**Table 9: PHYSICAL PROGRESS in PRODUCTION OF PRECAST ITEMS till date,**

Physical Progress till date							
S.N.	Description	Unit	Progress			Total to Date (RM.)	Remarks
			BoQ	Up to Previous month (RM.)	This Month (RM.)		
1	Precast Slab	No		49,571.00	8,300.00	57,871.00	Under progress
2	Kerb Stone	Rm	147,729.68	79,293.30	-	79,293.30	53.67%

**Table 10: PHYSICAL PROGRESS in PRODUCTION/PURCHASE OF RCC Hume Pipe at Itahari till date,**

Physical Progress till date							
S.N.	Description	Diameter (mm)	Progress			Total to Date (RM.)	Remarks
			BoQ (RM)	Up to Previous month (RM.)	This Month (RM.)		
1	RCC Pipe	300	336.00	336.00	-	336.00	
2	RCC Pipe	450	681.00	681.00	-	681.00	
3	RCC Pipe	500	842.00	842.00	-	842.00	
4	RCC Pipe	600	382.00	382.00	-	382.00	
	<b>Total</b>						



**Table 11: PHYSICAL PROGRESS in PRODUCTION/PURCHASE OF HDPE Pipe till date.**

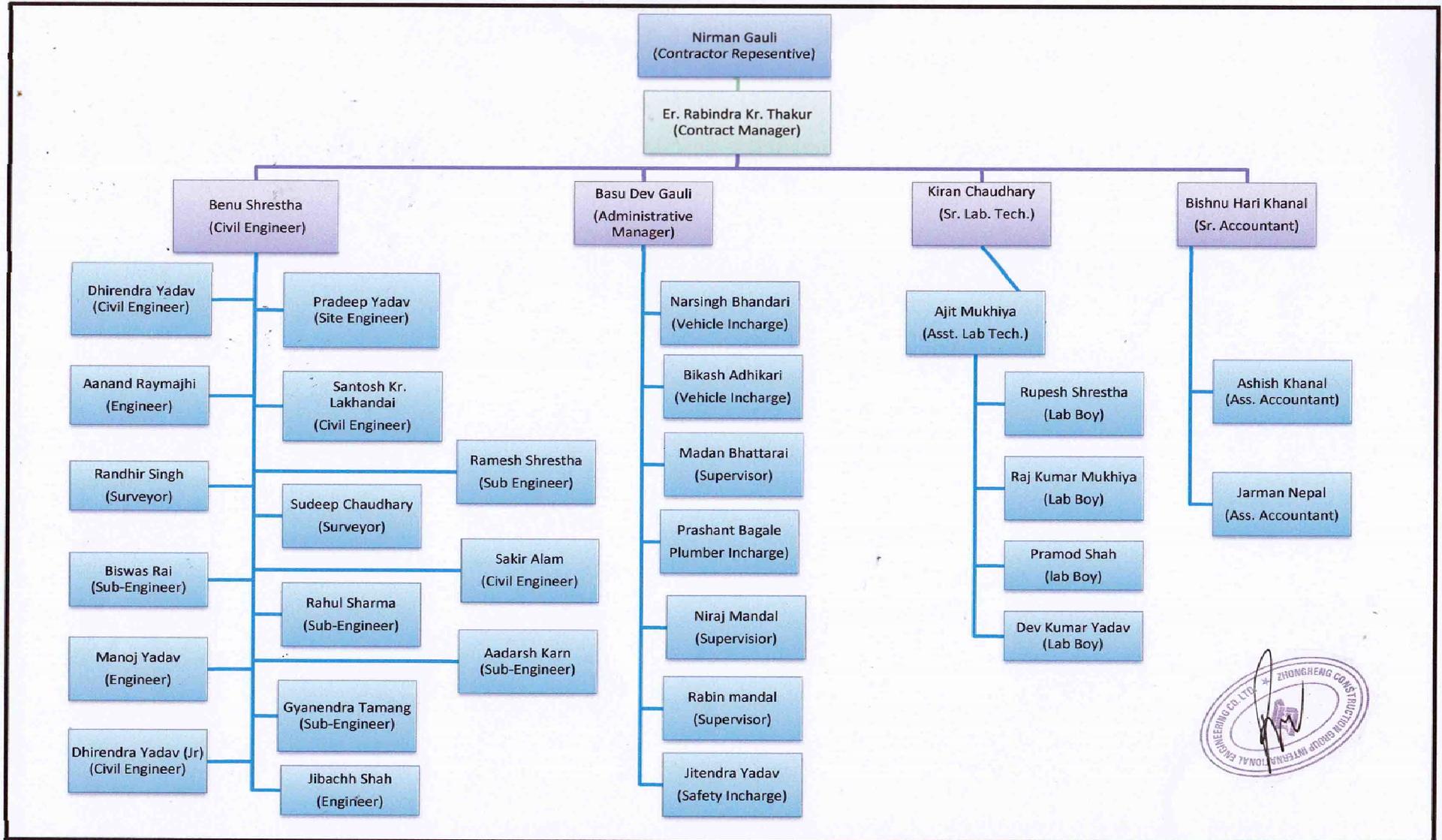
<i>Physical Progress till date</i>							
<i>S.N.</i>	<i>Description</i>	<i>Diameter (mm)</i>	<i>Progress</i>			<i>Total to Date (RM.)</i>	<i>Remarks</i>
			<i>BoQ (RM)</i>	<i>Up to Previous month (RM.)</i>	<i>This Month (RM.)</i>		
1	HDPE Pipe	110.00	1,987.20	4,487.20	-	4,487.20	<b>Under process</b>
2	HDPE Pipe	200.00	16,656.00	16,500.00	-	16,500.00	
3	HDPE Pipe	250.00	115.00	450.00	-	450.00	
<b>Total</b>							

**Table 12: PHYSICAL PROGRESS in PRODUCTION/PURCHASE OF UPVC Pipe till date.**

<i>Physical Progress till date</i>							
<i>S.N.</i>	<i>Description</i>	<i>Diameter (mm)</i>	<i>Progress</i>			<i>Total to Date (RM.)</i>	<i>Remarks</i>
			<i>BoQ (RM)</i>	<i>Up to Previous month (RM)</i>	<i>This Month (Rm.)</i>		
1	UPVC Pipe	160.00	5,050.00	5,050.00	0.00	5,050.00	
2	UPVC Pipe	110.00	5,050.00	5,050.00	0.00	5,050.00	



Details of Contractor's Site Personnel



## 7. CONTRACTOR'S MANPOWER

**Table 13: CONTRACTOR'S KEY STAFFS**

S. No.	Position	Minimum Number Required as per Contract	ZHONGHENG CONSTRUCTION Group	Remarks
1	Project/Contract Manager (1 No) 15/10 Yrs. (Total/Similar Exp.)	1	1	
2	Civil Engineer- 10/6	2	2	
3	Sanitary Engineer- (1no.)- 12/8	1	-	
4	Road Engineer- (1no.)-12/8	1	1	
5	Electromechanical Engineer-(1no)- 10/5	1	-	
6	Safety Engineer	-	1	
7	Site Engineer	-	8	
8	Sub- Engineer	-	5	
9	Accountant	-	3	
10	Lab Technician	-	5	
11	Store Keeper	-	1	
12	Vehicle In charge	-	2	
13	Skilled Labors		49	
14	Unskilled Labors		145	



## 8. CONTRACTOR'S EQUIPMENT

**Table 14: CONTRACTOR'S EQUIPMENT**

S.No	Equipment Type and Characteristics	Min Number required as per Contract	ZHONGHENG CONSTRUCTION Group	Remarks
1	Excavator (200 above)	5	2	Backhoe loader-9 nos.
2	Crane (10 ton capacity)	3	-	
3	Asphalt plant of adequate capacity	1	1	
4	Asphalt pavers	1	1	
5	Vibrating roller	2	4	Among 4nos., 2ton rollers-2nos.
6	Pneumatic tyre roller 8 to 10 ton	2	1	
7	Smooth wheeled roller 8 to 10 ton	1	1	
8	Grader	1	2	
9	Track Dozer (120 to 180 HP)	1	-	
10	Bitumen distributor (4 to 6 Kilo Litres)	1	1	
11	Water browser ( minimum 5000 Litres)	3	6	
12	Chips spreader	1	-	
13	Bitumen decanter minimum 4000 Litres. ( preheating container)	2	2	
	Air compressor	2	2	
14	Tipping Trucks	5	5	
15	Service vehicle	15	25	
16	Survey equipment (Total station with accessories)	2	5	
17	Theodolite	1	1	
18	Levelling	2	-	
19	Mobile Generator 15-20 KVA	5	10	
20	Mixer Machine	3	9	



S.No	Equipment Type and Characteristics	Min Number required as per Contract	ZHONGHENG CONSTRUCTION Group	Remarks
22	Concrete Batching Plant	1	-	
23	Concrete pump	1	-	
24	Drain cleaner/ Nala cleaner	2	-	
25	Broomer	-	2	
26	Motor Bike	-	11	
27	Plate Compactor	-	4	
28	Water Pump	-	14	

## 9. WORK PLAN FOR THE NEXT MONTH

Following are the Contractor’s works in the next month program.

- Detail Surveying works at various Road sections.
- Road works
- Precast production works at contractor’s yard.
- Road Side drain works.
- Laying of Kerb Stone, cover slab and interlocking tiles.
- Sewer inlet and House Connection works.
- Brick Manholes for sewer line.
- Relocation of electric poles and water supply works, etc.



ANNEX-1: Photographs of July, 2019





Meeting chaired by Mr Bhim Parajuli, Mayor



Curing of Precast slab at Precast Yard



**Production of precast slab at Precast Yard**



**Site visit by Mr. Indu Dhakal Project Monitoring Engineer, ADB Consultant at WWTP Lab, Biratnagar**



Site visit of Mr. Indu Dhakal, Project Monitoring Engineer, ADB Consultant, RUDP Lab at Judi



Site visit by Mr. Indu Dhakal Project Monitoring Engineer, ADB Consultant at RUDP Lab at Judi, Biratnagar



Outlet of B1



Outlet of B2



Outlet of B3



Outlet of S13



Outlet of S5



Outlet of S9

ANNEX-2: Minutes of Meeting July, 2019

**ATTACHED**



**Building Design Authority (P) Ltd**



in Joint Venture with  
 B.N.Consultancy Pvt. Ltd and Plus Engineers & Architects (P) Ltd, Kathmandu, Nepal  
 REGIONAL URBAN DEVELOPMENT PROJECT (RUDP), ADB Loan No: 47252

Biratnagar Metropolitan city, Biratnagar

**MINUTES OF MEETING NO. – 26**

**Contract: RUDP/ICB/BRT- 02**

**Date: 28 July, 2019**

**Time: 10:30 AM**

**Venue: PIU Office, Biratnagar**

**Attendance**

**Employer:**

1. Mr. Bhim Parajuli, Mayor, BMC
2. Mrs. Indira Karki, Deputy Mayor, BMC
3. Mr. Prakash Narayan Chaudhary, DPM
4. Mr. Ghanashyam Kafley, Project Engineer

**Contractor:**

1. Mr. Ravindra Kumar Thakur, Contract Manager

**Consultant:**

1. Mr. Giresh Chand , Team Leader
2. Mr. H. K. Mandal, Expert/Quantity Surveyor
3. Mr. Rajan Shrestha, CSE

Meeting was chaired by Mayor, Mr. Bhim Parajuli and welcomed by Deputy Project Manager. In viewing the Krishna Janmashthami/ Ratha Yatra on dated 5<sup>th</sup> /6<sup>th</sup> Bhadra 2076, following matters were discussed and decided:

S.N.	Minutes	Action by
1.	TL, Mr. Chand briefed the present status of the project.  Mayor, Mr. Parajuli described the religious importance of Ratha Yatra globally and emphasized on road clearance/maintenance of the following roads:  1) R3 (Tinpaini to Banjara Chowk) 2) R44 (Devkota Chowk to Hatt Khola) 3) R3 (Devkota chowk to NTC Building) 4) R2 ( Radha krishna Mandir to Mahendra Chowk) 5) R46 (Jaljala Road)	Employer/Consultant/ Contractor



**Building Design Authority (P) Ltd**



B.N.Consultancy Pvt. Ltd and Plus Engineers & Architects (P) Ltd, Kathmandu, Nepal

REGIONAL URBAN DEVELOPMENT PROJECT (RUDP), ADB Loan No: 47252

Biratnagar Metropolitan City, Biratnagar

	<p>-For R3 (Tinpaini to Banjara Chowk), CM, Mr. Ravindra Thakur proposed to start Manholes from Tinpaini to Banjara accompanied with side drains construction. Mayor and Deputy Mayor asked assurance for completion of manhole and side drain with smooth riding surface before end of Shrawan. CM assured to make smooth riding surface as discussed before end of Shrawan.</p> <p>-For other roads like R44 (Devkota Chowk to Hatt Khola Chowk), R3 (Devkota chowk to NTC Building), R2 ( Radha krishna Mandir to Mahendra Chowk), R46 (Jaljala Road), CM agreed to make smooth riding surface by the end of Shrawan as discussed</p>	
2.	<p>Mayor and DPM advised for the road markings works by thermoplastic for uniformity with Phase II, RUDP from Tinpaini to Pupalal chowk (Road constructed during STIEUP phase I)</p>	Employer/Consultant/Contractor
3.	<p>CM, Mr Thakur expressed that they are facing problem to resume the work as the quantity in BoQ had already been completed and VO still in progress. Mayor assured and instructed that there would be no financial problem to resume the work as soon as possible. He further reminded about the Minutes of Meeting (Board Meeting)</p>	Employer/Consultant/Contractor
4.	<p>The meeting was concluded to be called again by the end of Shrawan.</p>	Employer/Consultant/Contractor

Handwritten signatures and initials are present below the table, including 'H. U.', 'D. P.', 'R. T.', 'M. S.', and 'S. G.'.



ANNEX-3: Laboratory Test Results of July, 2019

**ATTACHED**













































**REGIONAL URBAN DEVELOPMENT PROJECT**

Biratnagar Metropolitan City  
Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Field Density Test

Location:-R-12

Month	July
Year	2019
Type of Material	Base

Sn.	Lab.Ref.no	Testing Date	Chainage	Moisture content %		Density (gm/cc)		Compaction %	
				OMC%	Field MC%	Max.Dry density	Field Dry density	Compaction %	Specified
1	RUDP-B-FD-1, L/S	5-Jul-19	0+155	5.80	5.72	2.244	2.222	99.01	98
2	RUDP-B-FD-1, C/L	5-Jul-19	0+240	5.80	4.66	2.244	2.236	99.65	98
3	RUDP-B-FD-1, R/S	5-Jul-19	0+290	5.80	5.26	2.244	2.213	98.63	98
4	RUDP-B-FD-1, C/L	5-Jul-19	0+350	5.80	5.48	2.244	2.206	98.32	98
5	RUDP-B-FD-1, L/S	5-Jul-19	0+380	5.80	5.65	2.244	2.240	99.81	98
6	RUDP-B-FD-1, R/S	5-Jul-19	0+400	5.80	5.89	2.244	2.241	99.88	98

<p><b>Contractor</b></p> <p>ZHONGYING CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p> 		<p><b>Consultant</b></p> <p>BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS &amp; ARCHITECTS (P) LTD, KATHMANDU, NEPAL.</p> 	
<p>Checked By Engineer Benu Shrestha</p> 	<p>Submitted By Contract Manager Rabindra Kr. Thakur</p> 	<p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p> 	<p>Approved By Team Leader Giresh Chand</p> 















REGIONAL URBAN DEVELOPMENT PROJECT Biratnagar Metropolitan City Contract No: RUDP/ICB/BRT-02 Daily Application Rate Check for Priming work SUMMARY FOR THE MONTH OF July 2019											
Type of Bitumen: 80/100 P.G Cutter Percentage: MC 70:MC 30											
SN NO	Location	Date of Priming	Station From	Station to	Side of Priming	Area of Priming (M)	Intersection Area m2	Total Area M2	Bitumen Consumption (Ltr)	Application Rate By Deep Ltr/m2	Application Rate BI Tray Test Ltr/m2
1	R-6, South of Prativa Chowk	1-Jul	0+000	0+513	Both side	2144.34	0	2144.34	2300	1.07	1.06
2	R-32	1-Jul	0+000	0+150	Both Side	627	0	627	650	1.04	1.03
Total									2950		
Required specification for Prime coat 1.0 Lit/M2 ± 5% — Specific Gravity of Bitumen 1.033											
Contractor											
ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD						BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL					
Checked By Engineer Benu Shrestha			Submitted By Contract Manager Rabintra Kr. Thakur			Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajanshreshtha			Approved By Team Leader Gireesh Chand		



**REGIONAL URBAN DEVELOPMENT PROJECT**  
 Biratnagar Metropolitan City  
 Contract No: RUDP/ICB/BRT-02  
 Daily Application Rate Check for TACK COAT  
 SUMMARY FOR THE MONTH OF JULY 2019

Type of Bitumen: 80/100 P.G

S.N.	Location	Date of Tack coat	Station From	Station to	Side of Tack coat	Area of Tack coat	Intersection Area m2	Total Area M2	Bitumen Consumption	Application Rate By Dip Lit/m2	Application Rate Bt Tray Test Lit/m2
1	R-32	4-Jul-19	0+000	0+190	BHS	627	0	627.00	380	0.56	0.51
2	R-6 (south of prativa chowk)	5-Jul-19	0+000	0+513	BHS	2144.34	0	2144.34	1250	0.58	0.53
							Total	2500			

**Required tack coat is 0.40 to 0.60 Lit/M2 According to Road Note -3, Section 711.2**  
 Specific Gravity of Bitumen 1.033

<p align="center"><b>Contractor</b></p> <p align="center">ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p> <p align="center">  </p> <p>Checked By                  Engineer                  Benu Shrestha</p>	<p align="center"><b>Consultant</b></p> <p align="center">BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH                  B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS &amp;                  ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p> <p align="center">  </p> <p>Submitted By                  Contract Manager                  Rabindra Kr. Thakur</p> <p>Verified By                  Expert Qty Surveyor/CSE                  H.K. Mandal/Rajan Shrestha</p> <p>Approved By                  Team Leader                  Giresch Chand</p>
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REGIONAL URBAN DEVELOPMENT PROJECT											
Biratnagar Metropolitan City											
Contract No:- RUDP/ICB/BRT-02											
Summary Sheet of Mortar Test Report											
							Month		July		
							Year		2019		
							Description of Sample		Brick Wall		
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand	Date of Casting	Date of Testing		Strength, N/mm <sup>2</sup>		Type of Grade
							7 Days	28 Days	7 Days	28 Days	
1	T3L5	MR-2054	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19	9.89	7.5	
2	T2L19Y	MR-2055	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19	8.93	7.5	
3	T3L7B	MR-2056	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19	8.24	7.5	
4	T3L Trunk	MR-2057	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19	9.07	7.5	
5	R-19	MR-2058	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19	8.52	7.5	
6	T2L19X	MR-2059	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19	9.48	7.5	
7	R-3	MR-2060	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19	8.52	7.5	
8	R-83	MR-2061	Saptakoshi	OPC	Chisang Khola	4-Jun-19	11-Jun-19	2-Jul-19	9.48	7.5	
9	R-6(Branch	MR-2062	Saptakoshi	OPC	Chisang Khola	4-Jun-19	11-Jun-19	2-Jul-19	8.38	7.5	
10	R-110	MR-2063	Saptakoshi	OPC	Chisang Khola	4-Jun-19	11-Jun-19	2-Jul-19	9.89	7.5	
11	T3L7B	MR-2064	Saptakoshi	OPC	Chisang Khola	4-Jun-19	11-Jun-19	2-Jul-19	8.24	7.5	
12	T2L19X	MR-2065	Saptakoshi	OPC	Chisang Khola	5-Jun-19	12-Jun-19	3-Jul-19	9.20	7.5	
13	R-9	MR-2066	Saptakoshi	OPC	Chisang Khola	5-Jun-19	12-Jun-19	3-Jul-19	9.00	7.5	
14	R-6 (Branch Road)	MR-2067	Saptakoshi	OPC	Chisang Khola	6-Jun-19	13-Jun-19	4-Jul-19	9.07	7.5	
15	T3L7C	MR-2068	Saptakoshi	OPC	Chisang Khola	6-Jun-19	13-Jun-19	4-Jul-19	8.52	7.5	
16	T2L19Y	MR-2069	Saptakoshi	OPC	Chisang Khola	7-Jun-19	14-Jun-19	5-Jul-19	8.93	7.5	
17	R-19	MR-2070	Saptakoshi	OPC	Chisang Khola	7-Jun-19	14-Jun-19	5-Jul-19	8.24	7.5	
18	T2L19Y	MR-2071	Saptakoshi	OPC	Chisang Khola	8-Jun-19	15-Jun-19	6-Jul-19	8.93	7.5	
19	R-9	MR-2072	Saptakoshi	OPC	Chisang Khola	8-Jun-19	15-Jun-19	6-Jul-19	8.79	7.5	
20	R-6 (Branch Road)	MR-2073	Saptakoshi	OPC	Chisang Khola	8-Jun-19	15-Jun-19	6-Jul-19	9.34	7.5	
21	T3L7C	MR-2074	Saptakoshi	OPC	Chisang Khola	8-Jun-19	15-Jun-19	6-Jul-19	8.24	7.5	
22	R-83	MR-2075	Saptakoshi	OPC	Chisang Khola	9-Jun-19	16-Jun-19	7-Jul-19	8.11	7.5	
23	T2L19Y	MR-2076	Saptakoshi	OPC	Chisang Khola	9-Jun-19	9-Jun-19	7-Jul-19	8.93	7.5	
24	T3L10	MR-2077	Saptakoshi	OPC	Chisang Khola	10-Jun-19	17-Jun-19	8-Jul-19	9.48	7.5	
25	T3L7B	MR-2078	Saptakoshi	OPC	Chisang Khola	10-Jun-19	17-Jun-19	8-Jul-19	9.20	7.5	
26	T3L5	MR-2079	Saptakoshi	OPC	Chisang Khola	10-Jun-19	17-Jun-19	8-Jul-19	9.34	7.5	
27	R-2	MR-2080	Saptakoshi	OPC	Chisang Khola	10-Jun-19	17-Jun-19	8-Jul-19	8.24	7.5	
28	R-9	MR-2081	Saptakoshi	OPC	Chisang Khola	10-Jun-19	17-Jun-19	8-Jul-19	8.79	7.5	
29	T3L39A	MR-2082	Saptakoshi	OPC	Chisang Khola	11-Jun-19	18-Jun-19	9-Jul-19	9.20	7.5	
30	T3L5	MR-2083	Saptakoshi	OPC	Chisang Khola	12-Jun-19	19-Jun-19	10-Jul-19	8.93	7.5	
31	R-19	MR-2084	Saptakoshi	OPC	Chisang Khola	13-Jun-19	20-Jun-19	11-Jul-19	8.93	7.5	
32	R-83	MR-2085	Saptakoshi	OPC	Chisang Khola	13-Jun-19	20-Jun-19	11-Jul-19	8.24	7.5	
<b>Contractor</b>						<b>Consultant</b>					
ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD						BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL					
Checked By Engineer Benu Shrestha			Submitted By Contract Manager Rabindra Kr. Thakur			Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha			Approved By Team Leader Giresh Chand		



**REGIONAL URBAN DEVELOPMENT PROJECT**

**Biratnagar Metropolitan City**

**Contract No:- RUDP/ICB/BRT-02**

**Summary Sheet of Mortar Test Report**

							Month		July		
							Year		2019		
							Description of Sample			Brick Wall	
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand	Date of Casting	Date of Testing		Strength, N/mm <sup>2</sup>		Type of Grade
							7 Days	28 Days	7 Days	28 Days	
33	T3L5	MR-2086	Saptakoshi	OPC	Chisang Khola	13-Jun-19	20-Jun-19	11-Jul-19	8.79	7.5	
34	T2L19Y	MR-2087	Saptakoshi	OPC	Chisang Khola	14-Jun-19	21-Jun-19	12-Jul-19	8.52	7.5	
35	R-83	MR-2088	Saptakoshi	OPC	Chisang Khola	14-Jun-19	21-Jun-19	12-Jul-19	8.79	7.5	
36	T3L10	MR-2089	Saptakoshi	OPC	Chisang Khola	14-Jun-19	21-Jun-19	12-Jul-19	8.93	7.5	
37	T3L7B	MR-2090	Saptakoshi	OPC	Chisang Khola	15-Jun-19	22-Jun-19	13-Jul-19	9.20	7.5	
38	R-9	MR-2091	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19	8.52	7.5	
39	T3L7B	MR-2092	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19	8.52	7.5	
40	T2L19Y	MR-2093	Saptakoshi	OPC	Chisang Khola	17-Jun-19	24-Jun-19	15-Jul-19	9.34	7.5	
41	T3L10	MR-2094	Saptakoshi	OPC	Chisang Khola	17-Jun-19	24-Jun-19	15-Jul-19	8.79	7.5	
42	T3L13C	MR-2095	Saptakoshi	OPC	Chisang Khola	18-Jun-19	25-Jun-19	16-Jul-19	9.07	7.5	
43	T3L5	MR-2096	Saptakoshi	OPC	Chisang Khola	18-Jun-19	25-Jun-19	16-Jul-19	9.20	7.5	
44	R-6 (Branch)	MR-2097	Saptakoshi	OPC	Chisang Khola	18-Jun-19	25-Jun-19	16-Jul-19	8.52	7.5	
45	T2L19X	MR-2098	Saptakoshi	OPC	Chisang Khola	19-Jun-19	26-Jun-19	17-Jul-19	9.34	7.5	
46	R-19	MR-2099	Saptakoshi	OPC	Chisang Khola	19-Jun-19	26-Jun-19	17-Jul-19	9.20	7.5	
47	T2L19G	MR-2100	Saptakoshi	OPC	Chisang Khola	20-Jun-19	27-Jun-19	18-Jul-19	8.79	7.5	
48	T3L7C	MR-2101	Saptakoshi	OPC	Chisang Khola	20-Jun-19	27-Jun-19	18-Jul-19	9.62	7.5	
49	T2L19Y	MR-2102	Saptakoshi	OPC	Chisang Khola	20-Jun-19	27-Jun-19	18-Jul-19	9.20	7.5	
50	R-19	MR-2103	Saptakoshi	OPC	Chisang Khola	20-Jun-19	27-Jun-19	18-Jul-19	8.38	7.5	
51	T3L7C	MR-2104	Saptakoshi	OPC	Chisang Khola	20-Jun-19	27-Jun-19	18-Jul-19	8.79	7.5	
52	T2L19G	MR-2105	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19	8.52	7.5	
53	R-19	MR-2106	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19	8.52	7.5	
54	T3L39	MR-2107	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19	9.62	7.5	
55	R-9	MR-2108	Saptakoshi	OPC	Chisang Khola	21-Jun-19	9-Jul-19	19-Jul-19	9.89	7.5	
56	T3L7C	MR-2109	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19	8.52	7.5	
57	T3L5	MR-2110	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19	8.52	7.5	
58	R-19	MR-2111	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19	9.89	7.5	
59	T3L7C	MR-2112	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19	8.93	7.5	
60	R-19	MR-2113	Saptakoshi	OPC	Chisang Khola	22-Jun-19	29-Jun-19	20-Jul-19	8.93	7.5	
61	T3L5	MR-2114	Saptakoshi	OPC	Chisang Khola	22-Jun-19	29-Jun-19	20-Jul-19	8.79	7.5	
62	T3L13C	MR-2115	Saptakoshi	OPC	Chisang Khola	22-Jun-19	29-Jun-19	20-Jul-19	9.07	7.5	
63	T2L19G	MR-2116	Saptakoshi	OPC	Chisang Khola	22-Jun-19	29-Jun-19	20-Jul-19	8.65	7.5	
64	T3L39	MR-2117	Saptakoshi	OPC	Chisang Khola	23-Jun-19	30-Jun-19	21-Jul-19	8.79	7.5	

 <p><b>Contractor</b></p> <p>ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p>		 <p><b>Consultant</b></p> <p>BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS &amp; ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p>	
<p>Checked By Engineer Benu Shrestha</p>	<p>Submitted By Contract Manager Rabindra Kr. Thakur</p>	<p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p>	<p>Approved By Team Leader Giresh Chand</p>



**REGIONAL URBAN DEVELOPMENT PROJECT**

**Biratnagar Metropolitan City**

**Contract No:- RUDP/ICB/BRT-02**

**Summary Sheet of Mortar Test Report**

							Month		July			
							Year		2019			
							Description of Sample			Brick Wall		
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand	Date of Casting	Date of Testing		Strength, N/mm <sup>2</sup>		Type of Grade	
							7 Days	28 Days	7 Days	28 Days		
65	T2L19G	MR-2118	Saptakoshi	OPC	Chisang Khola	23-Jun-19	30-Jun-19	21-Jul-19		9.48	7.5	
66	T3L39	MR-2119	Saptakoshi	OPC	Chisang Khola	26-Jun-19	3-Jul-19	24-Jul-19	5.87	9.20	7.5	
67	T3L5	MR-2120	Saptakoshi	OPC	Chisang Khola	26-Jun-19	3-Jul-19	24-Jul-19	5.87	8.24	7.5	
68	T3L13-C	MR-2121	Saptakoshi	OPC	Chisang Khola	26-Jun-19	3-Jul-19	24-Jul-19	5.73	8.79	7.5	
69	Madhumara Site	MR-2122	Saptakoshi	OPC	Chisang Khola	27-Jun-19	4-Jul-19	25-Jul-19	6.29	9.48	7.5	
70	T3L13-C	MR-2123	Saptakoshi	OPC	Chisang Khola	27-Jun-19	4-Jul-19	25-Jul-19	5.59	8.65	7.5	
71	R-9	MR-2124	Saptakoshi	OPC	Chisang Khola	28-Jun-19	5-Jul-19	26-Jul-19	6.15	9.89	7.5	
72	T2L19G	MR-2125	Saptakoshi	OPC	Chisang Khola	28-Jun-19	5-Jul-19	26-Jul-19	5.59	8.93	7.5	
73	T3L5	MR-2126	Saptakoshi	OPC	Chisang Khola	28-Jun-19	5-Jul-19	26-Jul-19	6.71	9.89	7.5	
74	T3L39	MR-2127	Saptakoshi	OPC	Chisang Khola	28-Jun-19	5-Jul-19	26-Jul-19	5.87	8.24	7.5	
75	T3L7C	MR-2128	Saptakoshi	OPC	Chisang Khola	30-Jun-19	7-Jul-19	28-Jul-19	6.15	8.79	7.5	
76	Madhumara Site	MR-2129	Saptakoshi	OPC	Chisang Khola	30-Jun-19	7-Jul-19	28-Jul-19	6.15	9.20	7.5	
77	T3L5	MR-2130	Saptakoshi	OPC	Chisang Khola	30-Jun-19	7-Jul-19	28-Jul-19	5.87	9.23	7.5	
78	R-9	MR-2131	Saptakoshi	OPC	Chisang Khola	30-Jun-19	7-Jul-19	28-Jul-19	6.15	8.79	7.5	
79	T3L39	MR-2132	Saptakoshi	OPC	Chisang Khola	30-Jun-19	7-Jul-19	28-Jul-19	5.59	8.24	7.5	
80	T3L5	MR-2133	Saptakoshi	OPC	Chisang Khola	2-Jul-19	9-Jul-19	30-Jul-19	6.29	9.62	7.5	
81	T3L13-C	MR-2134	Saptakoshi	OPC	Chisang Khola	2-Jul-19	9-Jul-19	30-Jul-19	6.57	8.65	7.5	
82	Madhumara Site	MR-2135	Saptakoshi	OPC	Chisang Khola	2-Jul-19	9-Jul-19	30-Jul-19	6.43	9.20	7.5	
83	Madhumara Site	MR-2136	Saptakoshi	OPC	Chisang Khola	3-Jul-19	10-Jul-19	31-Jul-19	6.43	9.20	7.5	
84	T2L19G	MR-2137	Saptakoshi	OPC	Chisang Khola	5-Jul-19	12-Jul-19	2-Aug-19	6.01		7.5	
85	R-9	MR-2138	Saptakoshi	OPC	Chisang Khola	5-Jul-19	12-Jul-19	2-Aug-19	6.01		7.5	
86	T3L7C	MR-2139	Saptakoshi	OPC	Chisang Khola	5-Jul-19	12-Jul-19	2-Aug-19	5.87		7.5	
87	R-9	MR-2140	Saptakoshi	OPC	Chisang Khola	18-Jul-19	25-Jul-19	15-Aug-19	6.29		7.5	
88	T3L22	MR-2141	Saptakoshi	OPC	Chisang Khola	18-Jul-19	25-Jul-19	15-Aug-19	6.15		7.5	
89	T3L39	MR-2142	Saptakoshi	OPC	Chisang Khola	18-Jul-19	25-Jul-19	15-Aug-19	6.29		7.5	
90	R-9	MR-2143	Saptakoshi	OPC	Chisang Khola	20-Jul-19	27-Jul-19	17-Aug-19	6.29		7.5	
91	T3L39	MR-2144	Saptakoshi	OPC	Chisang Khola	20-Jul-19	27-Jul-19	17-Aug-19	6.01		7.5	
92	T3L22	MR-2145	Saptakoshi	OPC	Chisang Khola	20-Jul-19	27-Jul-19	17-Aug-19	6.43		7.5	
93	R-9	MR-2146	Saptakoshi	OPC	Chisang Khola	20-Jul-19	27-Jul-19	17-Aug-19	6.85		7.5	

 <b>Contractor</b> ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD.		 <b>Consultant</b> BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU,	
Checked By Engineer Benu Shrestha	Submitted By Contract Manager Rabindra Kr. Thakur	Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha	Approved By Team Leader Giresch Chand



REGIONAL URBAN DEVELOPMENT PROJECT											
Biratnagar Metropolitan City											
Contract No:- RUDP/ICB/BRT-02											
Summary Sheet of Concrete Cube Test Report											
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand+Agg.	Date of Casting	Month		Year		Concrete Grade
							July		2019		
							Type of Material		Conc. Cube		
							Date of Testing		Strength, N/mm <sup>2</sup>		
							7 Days	28 Days	7 Days	28 Days	
1	T3L T. LINE	RUDP-2283	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19		22.41	M20
2	Koshi Yard	RUDP-2284	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19		22.73	M20
3	T3L10	RUDP-2285	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19		23.03	M20
4	Judi Yard	RUDP-2286	Saptakoshi	OPC	Chisang Khola	3-Jun-19	10-Jun-19	1-Jul-19		24.02	M20
5	Madhumara Yard	RUDP-2287	Saptakoshi	OPC	Chisang Khola	4-Jun-19	11-Jun-19	2-Jul-19		27.16	M25
6	R-9	RUDP-2288	Saptakoshi	OPC	Chisang Khola	5-Jun-19	12-Jun-19	3-Jul-19		21.48	M20
7	Koshi Yard	RUDP-2289	Saptakoshi	OPC	Chisang Khola	5-Jun-19	12-Jun-19	3-Jul-19		22.73	M20
8	R-3	RUDP-2290	Saptakoshi	OPC	Chisang Khola	5-Jun-19	12-Jun-19	3-Jul-19		22.55	M20
9	R-46	RUDP-2291	Saptakoshi	OPC	Chisang Khola	5-Jun-19	12-Jun-19	3-Jul-19		22.73	M20
10	R-110	RUDP-2292	Saptakoshi	OPC	Chisang Khola	6-Jun-19	13-Jun-19	4-Jul-19		23.48	M20
11	Judi Yard	RUDP-2293	Saptakoshi	OPC	Chisang Khola	6-Jun-19	13-Jun-19	4-Jul-19		23.03	M20
12	R-83	RUDP-2294	Saptakoshi	OPC	Chisang Khola	7-Jun-19	14-Jun-19	5-Jul-19		21.78	M20
13	T2L19X	RUDP-2295	Saptakoshi	OPC	Chisang Khola	7-Jun-19	14-Jun-19	5-Jul-19		21.56	M20
14	R-110	RUDP-2296	Saptakoshi	OPC	Chisang Khola	7-Jun-19	14-Jun-19	5-Jul-19		22.78	M20
15	R-9	RUDP-2297	Saptakoshi	OPC	Chisang Khola	7-Jun-19	14-Jun-19	5-Jul-19		22.11	M20
16	R-6,Branch Road	RUDP-2298	Saptakoshi	OPC	Chisang Khola	8-Jun-19	15-Jun-19	6-Jul-19		23.55	M20
17	Madhumara Yard	RUDP-2299	Saptakoshi	OPC	Chisang Khola	9-Jun-19	16-Jun-19	7-Jul-19		26.86	M25
18	R-2	RUDP-2300	Saptakoshi	OPC	Chisang Khola	9-Jun-19	16-Jun-19	7-Jul-19		23.13	M20
19	R-73	RUDP-2301	Saptakoshi	OPC	Chisang Khola	9-Jun-19	16-Jun-19	7-Jul-19		22.96	M20
20	T3L5	RUDP-2302	Saptakoshi	OPC	Chisang Khola	9-Jun-19	16-Jun-19	7-Jul-19		23.62	M20
21	T37C	RUDP-2303	Saptakoshi	OPC	Chisang Khola	10-Jun-19	17-Jun-19	8-Jul-19		21.71	M20
22	Madhumara Yard	RUDP-2304	Saptakoshi	OPC	Chisang Khola	11-Jun-19	18-Jun-19	9-Jul-19		22.00	M20
23	R-9	RUDP-2305	Saptakoshi	OPC	Chisang Khola	12-Jun-19	19-Jun-19	10-Jul-19		22.23	M20
24	R-6,Branch Road	RUDP-2306	Saptakoshi	OPC	Chisang Khola	12-Jun-19	19-Jun-19	10-Jul-19		23.43	M20
25	Koshi Yard	RUDP-2307	Saptakoshi	OPC	Chisang Khola	12-Jun-19	19-Jun-19	10-Jul-19		23.03	M20
26	T2L19Y	RUDP-2308	Saptakoshi	OPC	Chisang Khola	12-Jun-19	19-Jun-19	10-Jul-19		22.96	M20
27	T2L19Y	RUDP-2309	Saptakoshi	OPC	Chisang Khola	12-Jun-19	19-Jun-19	10-Jul-19		23.43	M20
28	R-19	RUDP-2310	Saptakoshi	OPC	Chisang Khola	12-Jun-19	19-Jun-19	10-Jul-19		23.75	M20
29	T3L T. LINE	RUDP-2311	Saptakoshi	OPC	Chisang Khola	12-Jun-19	19-Jun-19	10-Jul-19		22.48	M20
30	Madhumara Yard	RUDP-2312	Saptakoshi	OPC	Chisang Khola	13-Jun-19	20-Jun-19	11-Jul-19		26.55	M25
31	R-6,Branch Road	RUDP-2313	Saptakoshi	OPC	Chisang Khola	14-Jun-19	21-Jun-19	12-Jul-19		22.36	M20
32	T3L7B	RUDP-2314	Saptakoshi	OPC	Chisang Khola	14-Jun-19	21-Jun-19	12-Jul-19		24.25	M20
33	T3L5	RUDP-2315	Saptakoshi	OPC	Chisang Khola	15-Jun-19	22-Jun-19	13-Jul-19		22.59	M20
34	T3L7C	RUDP-2316	Saptakoshi	OPC	Chisang Khola	15-Jun-19	22-Jun-19	13-Jul-19		23.48	M20
35	Koshi Yard	RUDP-2317	Saptakoshi	OPC	Chisang Khola	15-Jun-19	22-Jun-19	13-Jul-19		22.33	M20
36	R-110	RUDP-2318	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19		21.78	M20
37	T3L22A	RUDP-2319	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19		22.18	M20
38	R-19	RUDP-2320	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19		22.88	M20
39	T2L19Y	RUDP-2321	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19		22.63	M20
40	Koshi Yard	RUDP-2322	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19		23.21	M20
41	T3L T. LINE	RUDP-2323	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19		22.96	M20
42	T3L5	RUDP-2324	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19		22.84	M20
43	T2L19X	RUDP-2325	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19		23.65	M20
44	R-83	RUDP-2326	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19		23.28	M20
45	R-6,Branch Road	RUDP-2327	Saptakoshi	OPC	Chisang Khola	16-Jun-19	23-Jun-19	14-Jul-19		23.48	M20
46	R-19	RUDP-2328	Saptakoshi	OPC	Chisang Khola	17-Jun-19	24-Jun-19	15-Jul-19		23.10	M20
47	T3L5	RUDP-2329	Saptakoshi	OPC	Chisang Khola	18-Jun-19	25-Jun-19	16-Jul-19		22.55	M20
48	Judi Yard	RUDP-2330	Saptakoshi	OPC	Chisang Khola	18-Jun-19	25-Jun-19	16-Jul-19		22.00	M20

<p align="center"><b>Contractor</b></p> <p align="center">ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p>		<p align="center"><b>Consultant</b></p> <p align="center">BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS &amp; ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p>	
<p>Checked By Engineer Benu Shrestha</p>	<p>Submitted By Contract Manager Rabindra K.Thakur</p>	<p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p>	<p>Approved By Team Leader Giresch Chand</p>



REGIONAL URBAN DEVELOPMENT PROJECT												
Biratnagar Metropolitan City												
Contract No:- RUDP/ICB/BRT-02												
Summary Sheet of Concrete Cube Test Report												
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand+Agg.	Date of Casting	Month		July		Concrete Grade	
							Year		2019			
							Type of Material		Conc. Cube			
							Date of Testing		Strength, N/mm <sup>2</sup>			
							7 Days	28 Days	7 Days	28 Days		
49	T2L19Y	RUDP-2331	Saptakoshi	OPC	Chisang Khola	19-Jun-19	26-Jun-19	17-Jul-19		23.28	M20	
50	R-110	RUDP-2332	Saptakoshi	OPC	Chisang Khola	19-Jun-19	26-Jun-19	17-Jul-19		22.73	M20	
51	T3L5	RUDP-2333	Saptakoshi	OPC	Chisang Khola	19-Jun-19	26-Jun-19	17-Jul-19		23.55	M20	
52	T2L19X	RUDP-2334	Saptakoshi	OPC	Chisang Khola	19-Jun-19	26-Jun-19	17-Jul-19		23.03	M20	
53	T3L5	RUDP-2335	Saptakoshi	OPC	Chisang Khola	20-Jun-19	27-Jun-19	18-Jul-19		22.81	M20	
54	Judi Yard	RUDP-2336	Saptakoshi	OPC	Chisang Khola	20-Jun-19	27-Jun-19	18-Jul-19		22.88	M20	
55	T3L13C	RUDP-2337	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19		22.65	M20	
56	R-19	RUDP-2338	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19		22.00	M20	
57	Judi Yard	RUDP-2339	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19		22.88	M20	
58	R-6	RUDP-2340	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19		23.03	M20	
59	T3L10	RUDP-2341	Saptakoshi	OPC	Chisang Khola	21-Jun-19	28-Jun-19	19-Jul-19		22.26	M20	
60	R-19	RUDP-2342	Saptakoshi	OPC	Chisang Khola	22-Jun-19	29-Jun-19	20-Jul-19		22.88	M20	
61	T3L13C	RUDP-2343	Saptakoshi	OPC	Chisang Khola	22-Jun-19	29-Jun-19	20-Jul-19		22.81	M20	
62	T3L22B	RUDP-2344	Saptakoshi	OPC	Chisang Khola	22-Jun-19	29-Jun-19	20-Jul-19		23.28	M20	
63	Judi Yard	RUDP-2345	Saptakoshi	OPC	Chisang Khola	22-Jun-19	29-Jun-19	20-Jul-19		22.88	M20	
64	R-9	RUDP-2346	Saptakoshi	OPC	Chisang Khola	22-Jun-19	29-Jun-19	20-Jul-19		23.73	M20	
65	T3L22A	RUDP-2347	Saptakoshi	OPC	Chisang Khola	22-Jun-19	29-Jun-19	20-Jul-19		22.63	M20	
66	Judi Yard	RUDP-2348	Saptakoshi	OPC	Chisang Khola	23-Jun-19	30-Jun-19	21-Jul-19		23.43	M20	
67	R-19	RUDP-2349	Saptakoshi	OPC	Chisang Khola	23-Jun-19	30-Jun-19	21-Jul-19		23.03	M20	
68	T3L13C	RUDP-2350	Saptakoshi	OPC	Chisang Khola	23-Jun-19	30-Jun-19	21-Jul-19		23.18	M20	
69	T2L19G	RUDP-2351	Saptakoshi	OPC	Chisang Khola	23-Jun-19	30-Jun-19	21-Jul-19		23.43	M20	
70	T3L7C	RUDP-2352	Saptakoshi	OPC	Chisang Khola	23-Jun-19	30-Jun-19	21-Jul-19		22.33	M20	
71	T3L39	RUDP-2353	Saptakoshi	OPC	Chisang Khola	24-Jun-19	1-Jul-19	22-Jul-19	15.35	22.11	M20	
72	T3L5	RUDP-2354	Saptakoshi	OPC	Chisang Khola	24-Jun-19	1-Jul-19	22-Jul-19	15.65	22.81	M20	
73	T3L13-C	RUDP-2355	Saptakoshi	OPC	Chisang Khola	24-Jun-19	1-Jul-19	22-Jul-19	14.53	22.21	M20	
74	Madhumara site	RUDP-2356	Saptakoshi	OPC	Chisang Khola	26-Jun-19	3-Jul-19	24-Jul-19	14.38	22.88	M20	
75	R-9	RUDP-2357	Saptakoshi	OPC	Chisang Khola	28-Jun-19	5-Jul-19	26-Jul-19	14.90	23.18	M20	
76	T2L19G	RUDP-2358	Saptakoshi	OPC	Chisang Khola	28-Jun-19	5-Jul-19	26-Jul-19	15.28	24.02	M20	
77	T3L7C	RUDP-2359	Saptakoshi	OPC	Chisang Khola	29-Jun-19	6-Jul-19	27-Jul-19	14.98	22.91	M20	
78	R-7	RUDP-2360	Saptakoshi	OPC	Chisang Khola	29-Jun-19	6-Jul-19	27-Jul-19	15.20	22.62	M20	
79	R-87	RUDP-2361	Saptakoshi	OPC	Chisang Khola	29-Jun-19	6-Jul-19	27-Jul-19	14.61	22.95	M20	
80	T3L22	RUDP-2362	Saptakoshi	OPC	Chisang Khola	29-Jun-19	6-Jul-19	27-Jul-19	15.28	23.73	M20	
81	T3L39	RUDP-2363	Saptakoshi	OPC	Chisang Khola	30-Jun-19	7-Jul-19	28-Jul-19	14.38	21.93	M20	
82	T3L13-C	RUDP-2364	Saptakoshi	OPC	Chisang Khola	30-Jun-19	7-Jul-19	28-Jul-19	14.23	23.03	M20	
83	Judi Yard	RUDP-2365	Saptakoshi	OPC	Chisang Khola	30-Jun-19	7-Jul-19	28-Jul-19	15.13	23.73	M20	
84	T3L5	RUDP-2366	Saptakoshi	OPC	Chisang Khola	2-Jul-19	9-Jul-19	30-Jul-19	14.46	22.51	M20	
85	R-9	RUDP-2367	Saptakoshi	OPC	Chisang Khola	2-Jul-19	9-Jul-19	30-Jul-19	14.83	23.25	M20	
86	R-9	RUDP-2368	Saptakoshi	OPC	Chisang Khola	3-Jul-19	10-Jul-19	31-Jul-19	13.93	22.78	M20	
87	T2L19G	RUDP-2369	Saptakoshi	OPC	Chisang Khola	3-Jul-19	10-Jul-19	31-Jul-19	14.98	22.11	M20	
88	R-7	RUDP-2370	Saptakoshi	OPC	Chisang Khola	4-Jul-19	11-Jul-19	1-Aug-19	14.53		M20	
89	Madhumara site	RUDP-2371	Saptakoshi	OPC	Chisang Khola	6-Jul-19	13-Jul-19	3-Aug-19	14.90		M20	
90	T3L5	RUDP-2372	Saptakoshi	OPC	Chisang Khola	6-Jul-19	13-Jul-19	3-Aug-19	14.75		M20	
91	R-87	RUDP-2373	Saptakoshi	OPC	Chisang Khola	6-Jul-19	13-Jul-19	3-Aug-19	14.61		M20	
92	R-12	RUDP-2374	Saptakoshi	OPC	Chisang Khola	17-Jul-19	24-Jul-19	14-Aug-19	15.05		M20	
93	R-6	RUDP-2375	Saptakoshi	OPC	Chisang Khola	17-Jul-19	24-Jul-19	14-Aug-19	15.43		M20	
94	R-82	RUDP-2376	Saptakoshi	OPC	Chisang Khola	17-Jul-19	24-Jul-19	14-Aug-19	14.46		M20	
95	R-9	RUDP-2377	Saptakoshi	OPC	Chisang Khola	18-Jul-19	25-Jul-19	15-Aug-19	14.16		M20	
96	T3L22	RUDP-2378	Saptakoshi	OPC	Chisang Khola	18-Jul-19	25-Jul-19	15-Aug-19	13.93		M20	

<p align="center"><b>Contractor</b></p> <p align="center">ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p>		<p align="center"><b>Consultant</b></p> <p align="center">BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS &amp; ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p>	
<p>Checked By Engineer Benu Shrestha</p>	<p>Submitted By Contract Manager Rabindra K.Thakur</p>	<p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p>	<p>Approved By Team Leader Girish Chand</p>













## ANNEX-4: SOCIAL & ENVIRONMENT SAFEGUARD

### **Monitoring Formats Attached – July 2019**



## Biratnagar Metropolitan City Regional Urban Development Project

Constructuon and Completion Of Sewarage, Drainage, Road, Foothpath and Road Furniture Works(RUDP/ICB/BRT)

### LABOUR DATA OF JULY 2019

LABOUR CLASS	LABOUR		COMPOSITION		ETHNIC COMPOSITION				
	SKILLED	UNSKILLED	MALE	FEMALE	JANJATI	DALIT	MUSLIM	MADHESI	BRAHMIN/CHHETRI
LOCAL	10	21	31	0	0	4	0	27	0
NON LOCAL	37	116	153	0	39	30	6	78	0
INDIAN	2	8	10	0	0	0	1	9	0
TOTAL	49	145	194	0	39	34	7	114	0



### Biratnagar Metropolitan City Regional Urban Development Project

Constructuon and Completion Of Sewarage, Drainage, Road, Foothpath and Road Furniture Works(RUDP/ICB/BRT)

LABOUR DATA OF JULY 2019

S.NO	LOCATION	TYPES OF WORK	TYPES OF WORKERS	LABOUR		COMPOSITION		ETHNIC COMPOSITION					
				SKILLED	UNSKILLED	MALE	FEMALE	JANJATI	DALIT	MUSLIM	MADHESI	BRAHMIN/CHHETRI	
1	R82	Gutter	LOCAL										
			NON LOCAL	4	12	16		5	5		6		
			INDIAN										
			TOTAL	16									
2	T115	Gutter	LOCAL										
			NON LOCAL	3	17	20		5			15		
			INDIAN										
			TOTAL	20									
3	R12	Weep Hole	LOCAL	2	5	7						7	
			NON LOCAL										
			INDIAN										
			TOTAL	7									
4	R12	Site Clearance	LOCAL	1	3	4						4	
			NON LOCAL										
			INDIAN										
			TOTAL	4									
5	R7	M.H Construction	LOCAL										
			NON LOCAL	3	7	10			5		5		
			INDIAN										
			TOTAL	10									
6	B1	Drain Rise	LOCAL										
			NON LOCAL	5	12	17		5	5		7		
			INDIAN										
			TOTAL	17									
7	B1	Back Filling	LOCAL										
			NON LOCAL	2	3	5					5		
			INDIAN										
			TOTAL	5									



8	R12	House Connection	LOCAL	4	7	11			4		7		
			NON LOCAL										
			INDIAN										
			TOTAL	11									
9	R105	House Connection	LOCAL	3	6	9					9		
			NON LOCAL										
			INDIAN										
			TOTAL	9									
10	R6	Interlock	LOCAL										
			NON LOCAL	4	12	16				6		10	
			INDIAN										
			TOTAL	16									
11	R46	Drain	LOCAL										
			NON LOCAL										
			INDIAN	2	8	10				1		9	
			TOTAL	10									
12	Madhumara Yard	Production	LOCAL										
			NON LOCAL	5	18	23			10			13	
			INDIAN										
			TOTAL	23									
13	R6	Gutter	LOCAL										
			NON LOCAL	3	9	12			2	5		5	
			INDIAN										
			TOTAL	12									
14	Judi Yard	Production	LOCAL										
			NON LOCAL	5	20	25			10	5		10	
			INDIAN										
			TOTAL	25									
15	R6	RCC Drain Maintenance	LOCAL										
			NON LOCAL	3	6	9			2	5		2	
			INDIAN										
			TOTAL	9									



**Details of Contractor's Personnel at Site**

**Staffs Name List**

SN.	Name	Position	Contact No	Remarks
1	Ravindra kumar Thakur	CM	9801159860	
2	Basu Gauli	AM	9801156727	
3	Benu Shrestha	Engineer	9801159861	
4	Dhirendra Yadav	Engineer	9801225283	
5	Randhir Singh	Engineer	9801159918	
6	Govind Jha	Engineer	9801157340	
7	Pradeep Yadav	Engineer	9801159896	
8	Jibachha Sah	Engineer	9805932183	
9	Dhirendra yadav jr	Engineer	9805913881	
10	Aanand Rayamajhi	Engineer	9801157317	
11	Santosh Kr Lakandae	Engineer	9801159863	
12	Sakir Alam	Engineer	9801160993	
13	Manoj kumar yadav	Engineer	9815714239	
14	Rahul Kr Sharma	Sub-Engineer	9801159862	
15	Adarsh Karn	Sub-Engineer		
16	Sudip Chaudhary	Surveyor	9801159859	
17	Biswas Rai	Sub-Engineer	9801159920	
18	Gyanendra Tamang	Sub-Engineer	9811357918	
19	Ramesh Shrestha	Sub-Engineer		
20	Jitendra Yadav	Safety incharge	9801160166	
21	Prashant Bagale	Plumbing Supervisor	9801159842	
22	Kiran Chaudhary	SLT	9801225281	
23	Rupesh Shrestha	LT	9811316006	
24	Ajit Mukhiya	LT	9827369882	
25	Pramod shah	LT	9815779383	
26	Dev Kr Yadav	LT		
27	Bishnu Hari Khanal	Chief Accountant	9801157314	
28	Aasish Khanal	Assistant Accountant	9801159867	
29	Bikash Adhikari	Vehicle incharge	9801159868	
30	Narsingh Bhandari	Vehicle incharge	9801157318	
31	Madan Bhattarai	Store Keeper	9801159634	



**Regional Urban Development Project (RUDP)  
Social Safeguard Monitoring  
Status of Key Social Issues Compliance**

Subproject Road : -RUDP/ICB/BRT/2

Month/Year: July 2019

Name of Contractor :-ZHONGGHENG Construction-  
GroupInternational Engineering Co pvt Beijing China.

Contract Package: RUDP/ICB/BRT/2

S.N	Key Social Issue	Compliance Status			Implementing Agency	Note of Remarks	Deadline
		Full	Partial	None			
1	Availability of drinking water services	√					
2	Availability of toilet facility in campsite	√					
3	Legal source of fuel wood use			√			
4	Legal document of fuel wood source			√			
5	Use of safety accessories	√					
6	Availability of first aid facility	√					
7	Basic wage rate to construction workers	√					
8	Equal wage rate to male and female workers		√				
9	Compensation of temporarily occupied land	√					
10	Compensation of temporarily occupied buildings	√					
11	Legal document of temporarily occupied assets	√					
12	Non use of child labour in construction activities	√					

Prepared by:



Verified by:

Monitored by:



**Environmental Monitoring Format**  
Regional Urban Development Project (RUDP)/Biratnagar

Name of Sub Project: RUDP/ Biratnagar  
 Contract Package: RUDP/ICB/BRT/02  
 Sub-project Component: - Road Lanes Improvement/ Sewerage Drainage  
 Month: July 2019

**Checklist**

SN	Activity	Description/Present Status (Compliance/Partially Compliance/Non Compliance)	Remarks/ Corrective actions for Non-Compliance
<b>1</b>	<b>Training</b>		
1.1	Health, Safety and EMP trainings and awareness	Yes	
1.2	Others awareness and skill trainings	No	
<b>2</b>	<b>Occupational health and safety</b>		
2.1	Insurance for workers	Yes	
2.2	Personal Protective Equipment (PPE) provided to labors and is using (helmet, facemasks, muffles, gloves, boots, jacket, goggles etc.)	Daily Provided	
2.3	Public notification Safety and warning signs and informative signboards in working sites for work safety	Yes Provided	
2.4	Use of barricades, caution tape and flag	Daily Used	
<b>3</b>	<b>Campsite management</b>		
3.1	Location	Judi, Keshaliya, Shanti Chowk, Rani	
3.2	First aid facilities available at camp and worksites	Yes	
3.3	Drinking water supply and sanitation facilities/ pit latrines	Tap water/ Hand Pump	
3.4	Waste Disposal and Management facilities	Yes	
3.5	Type of fuel used for cooking	L.P.G	
<b>4</b>	<b>Spoil and Construction material Management</b>		
4.1	Cut and fill balance maintained or not, Reuse of spoil materials	Cut & Fill balance maintained	
4.2	Use of safe spoil disposal locations	Not Applicable	
4.3	Disturbance to Pedestrian and traffic movement.	No any disturbance to pedestrians & traffic	



4.4	Use of private land and agreement with land owners	movement Yes	
5	<b>Air, Noise and Water Pollution</b>		
5.1	Dust emission and Noise pollution sites	Water sprinkled by tanker on such sites.	
5.2	Water quality monitoring result and locations	ok	
5.3	Blockage of natural drainages, water logging, drain water discharge into farmland/risky areas	Not Applicable	
6	<b>Quarrying of construction materials and Plants Installment</b>		
6.1	Quarry/borrow operation sites	Not Applicable	
6.2	Crusher plant and Asphalt plant operation restoration	Asphalt Plant	
7	<b>Impact/Disruption of Private properties</b>		
7.1	Building structures	Not Applicable	
7.2	Other utilities	Not Applicable	
8	<b>Impact/disruption of public infrastructures</b>		
8.1	Irrigation canal	Not Applicable	
8.2	Water supply pipe	Not Applicable	
8.3	Access road	Not Applicable	
8.4	Electric/Telephone pole	Not Applicable	
8.5	Others	Not Applicable	
9	<b>Sites for cultural and religious values</b>		
9.1	Cultural and religious sensitive spots (if any)	Not Applicable	
10	<b>Forest and vegetation</b>		
10.1	Number of trees removal	00	
10.2	No of tree plantation (Roadside)	Not Applicable	
11	<b>Accident cases and records</b>	No any records	
12	<b>Employment to local people</b>		
12.1	Men and women	Yes, both men and women	
12.2	Child labor (if any)	No	
13	<b>Establishment of Safeguard desk and meeting</b>	Yes	
14	<b>Grievances from local people and addressed</b>	Yes	

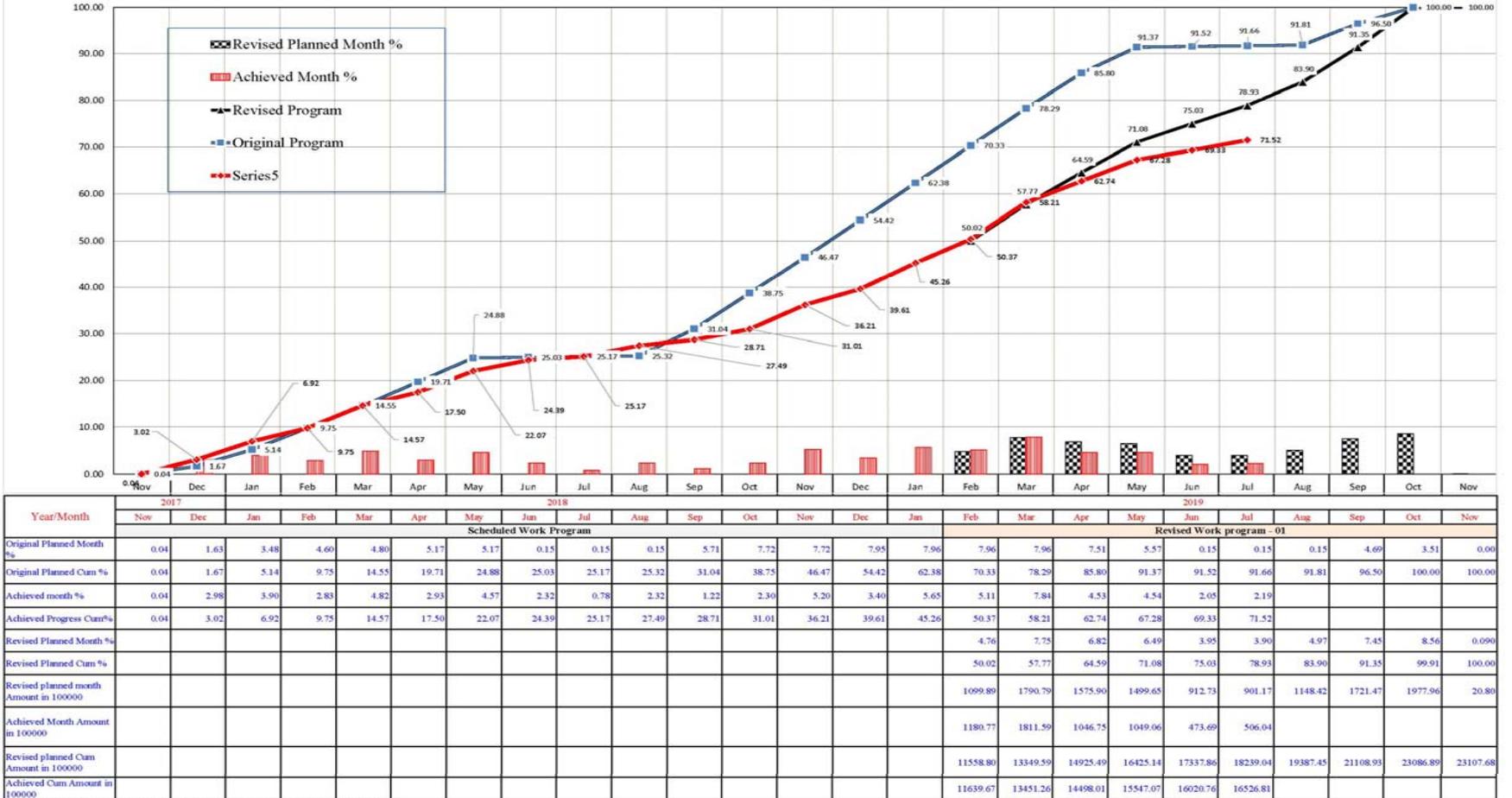


ANNEX-5: S-Curve

**ATTACHED – July 2019**



BIRATNAGAR METROPOLITAN CITY  
REGIONAL URBAN DEVELOPMENT PROJECT (RUDP)  
**S-CURVE (REVISED WORK PROGRAM-01)**



Note: Our Claim for Extension of Time remain valid as per contract.



Annex-6: Master Plan of RUDP Project



