



## **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**



**August 2018**

**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 by following Chapters as mentioned below.

- 1. Introduction/ Background-** It provides brief Account of 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 brief Account of 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 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 being 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. Having said that, the Progress may get affected by unpredicted events frequently occurring in case of our Country Nepal so such events are also enlisted for viewing the reasons behind affected Progress.
- 6. Details of Pre Cast Activities-** Details of Precast activities are also provided in this Chapter in order to demonstrate the Progress by the Contractor. Since in Urban Sector the Work is required to conduct in speedy manner, Precast work is best alternate to be provided. Hence, the details of Precast activities have been provided in order to determine whether the Contractor is able to meet the Schedule or not.
- 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> August 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

General Features	
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
Progress	
Road Rehabilitation (Asphalt)	19.17%
Sewer Line	40.79%
Storm Drain	97.44 %
Road Side Drain	69.88%
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, the consultant is not able to process for design of Integrated Solid Waste Management (ISWM) as per discussion.
Physical Progress up to date	Planned : 25.32% , Actual : 27.5 %; Lead(+) or Lag(-) by +2.18 % S curve attached
Financial Progress up to date	In Percentage: 22.84%, In Figure: NRs. 596,339,691.11(including VAT,PS and Price Adjustment) In Words: NRs. Five Hundred Ninety Six Million Three Hundred Thirty Nine Thousand Six Hundred Ninety One and Paise Eleven 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
1	Sewer Line						
a	HDPE/RCC	m	20,082.00	8,191.00	11,891.00	40.79%	
b	Manhole	No.	656.00	276.00	380.00	42.07%	
c	Sewer Inlet	No.	1,010.00	71.00	939.00	7.03%	
d	House Connection	No.	3,784.00	26.00	3,758.00	0.69%	
2	Storm Water Drain						
a	RCC Drain	m	652.89/585	570.00	15.00	97.44%	Revised Length =585m
b	Piles	No.	132.00	138.00	(6.00)	100.00%	Exceeded
3	Road						
a	Subgrade	m	73,860.00	24,377.00	49,483.00	33.75%	
b	Subbase	m	73,860.00	24,153.7	49,706.30	32.54%	
c	Base	m	73,860.00	18,398.1	55,461.90	26.19%	
d	Prime	m	73,860.00	14,167.5	59,692.50	19.18%	
e	Asphalt	m	73,860.00	14,167.5	59,692.50	19.18%	
4	Road Side Drain	m	26,050.00	18,204.25	7,845.75	69.88%	



## 3.1 SUB PROJECT COMPONENTS

### 3.1.1 SEWER LINES

Surveying works going on after identifying the all sewer lines i.e. T1, T2, T3, and T4. Production of manhole cover and precast are also going on at yard. Contractor has started the sewer inlet and house chamber connection works at R2, DSP road, T4Line 1 etc. and work is going on.

**Table 1: PROPOSED SEWER LINES**

S. NO.	Description	Unit	Original Quantity
1	<b>Sewerage Pipe Supply and Installation</b>	m	<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>	m	<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	2,902.00
2	<b>Manhole ( Brick / RCC)</b>	<b>no.</b>	<b>685.00</b>
3	<b>Sewer Inlet</b>	<b>no.</b>	<b>1,010.00</b>
4	<b>House Connection</b>	<b>no.</b>	<b>3,784.00</b>
5	<b>Reinstatement of Roads</b>	<b>km</b>	<b>73.86</b>
6	<b>Road side Drain</b>	<b>Km</b>	<b>26.05</b>
7	<b>Storm Water Drain</b>	<b>m</b>	<b>652.8</b>

Table: - 2 PHYSICAL PROGRESS IN SEWER LINES till August, 2018

SN	Locations	BoQ		Up to Pre Month		This month		Total to date		Progress %
		Length (m)	Manhole (no)	Length(m)	Manhole (no)	Length (m)	Manhole (no)	Length (m)	Manhole (no)	
1	Hume pipe(T2)	206.00	6.00							
2	Hume pipe(T3)	1,905.00	58.00	292.00	6.00			292.00	6.00	
3	Hume Pipe (T4)	130.00	4.00	326.00	11.00			326.00	11.00	
	<b>Subtotal in (m)</b>	<b>2,241.00</b>	<b>68.00</b>	<b>618.00</b>	<b>17.00</b>	-	-	<b>618.00</b>	<b>17.00</b>	
1	HDPE(T1)	1,825.00	57.00	1,037.00	30.00			1,037.00	30.00	
2	HDPE(T2)	3,927.00	147.00	2,996.00	113.00			2,996.00	113.00	
3	HDPE(T3)	9,997.00	316.00	2,771.00	97.00			2,771.00	97.00	
4	HDPE(T4)	2,092.00	68.00	769.00	19.00			769.00	19.00	
	<b>Subtotal in (m)</b>	<b>17,841.00</b>	<b>588.00</b>	<b>7,573.00</b>	<b>259.00</b>	-	-	<b>7,573.00</b>	<b>259.00</b>	
	<b>Total</b>	<b>20,082.00</b>	<b>656.00</b>	<b>8,191.00</b>	<b>276.00</b>	-	-	<b>8,191.00</b>	<b>276.00</b>	<b>40.79%</b>
	<b>Sewer Inlet</b>	<b>BoQ(no)</b>		<b>Up to Pre Month</b>		<b>This month</b>		<b>Total to date</b>		<b>Progress %</b>
1	Sewer inlet	1,010.00			28.00		43.00		71.00	7.03
2	House connection	3,784.00					26.00		26.00	0.69

### 3.2 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 August, 2018.

SN	Name of Drain	Length in m					Type of Drain	RCC	Length of Covered Drain in m	Remarks
		Original	Revised	Progress		Cumulative				
				Previous	This Month					
1	CN2-CN3(Chyan gh Baari Nala)	652.89	585	570	0	570	RCC, closed	570	570	
2	CN2-CN3(Chyan gh Baari Nala)	132 nos piles	138	138	0	138 nos.				Piling works completed
	Total									

### 3.3 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. The Contractor has started detail survey work for upgrading the deteriorated pavement surface.

Table No:-4 PROPOSED and PHYSICAL PROGRESS of pavement works till August, 2018

SN	Road Number	Name of Road	Length in m					Work Completed				Remarks
			Original	Revised	Progress		Total	Sub-base	Base	Asphalt	RCC	
					Previous	This Month		m	m	m	m	
1	R42	Bhagwati Marg	218	218	218		218	218	218	123		
2	R5	College Road	970	970	650		650	650	650			
3	B2	Gauri Shankar Marg	2777.83	2777.83	2152		2152	2152	2152	1999.8	200	
4	R65	Satghumti Marg	282	320	320		320	320				



5	R10 7		173	215	215		215	215				
6	R10 7 a		50	50	50		50	50				
7	R10 4	VIP Marg	273	273	273		273	273	273	273		
8	R3A	Madh umar a Marg	600	600	600		600	600	600	582		
9	B1	Kanc han Marg	1172. 94	1173	1173		1173	1173	1106	1106		
10	R21	Pratib ha Marg	1320	1320	950		950	950	950	689.6		
11	B3	Kesh aliya Marg	1574	1574	1574		1574	1574	1627.75	1627.75		
12	S13		1617	1617	1417		1417	1417	1417	1433.3		
13	R12	Kanc hha Dai Marg	1192	1192	837		837	837	837			
14	Rani site	Rani	4023	4023	2315		2315	2315	1702	1096		
15	R16	Satya Marg	604	604	604		604	604	604	542.1		
16	R26	Pasa ng Marg	617	654	654		654	654	654	215		
17	R28	Pusta kalay a Marg	635	635	635		635	635	635	339.2		
18	R27	Peep al Marg	810	810	580		580	580	580	300		
19	R25	Devi Marg	599	580	580		580	580	580	561.7		
20	R24	Prabh at Marg	384.4 1	380	380		380	380	380	364.95		
21	R37	Bangl amuk hi Marg	420	477	477		477	477	477	200.7		
22	R7	Mana kama na Marg	814	814	242		242	242	242			
23	R30	Shant i Marg	212	212		123.1	123.1		123.1	123.1		
24	R9	Fadin dra Marg	123	123		119	119		119	119		
25	S11	Samr at Marg	660	660	660		660	660	504.6	504.6		



26	R22	Amar Marg a	373.1	367.65	367.65		367.65	367.65	367.65	367.65		
27	R29	Shanti Marg	620	620		299	299	299	299	299		
28	R36	Gaurav Marg	218	218		220	220					
29	R33	Tarun Marg	285	285		171.5	171.5					
30	R64	Satya Narayan Marg	121	121	121		121	121				
31	R8			225	225		225	225				
32	N36			190	190		190	190				
33	R18 8	Shakti Marg	-	120	120		120	120				
34	R2	Main Road	-	300	300		300	300				
35	T3 Line 6A	Pandit Mrghnath Marg	-	220	220		220	220				
36	T2 Line 24C	Nava Jyoti Marg	-	205	205		205	205				
37	T2 Line 24D	Nava Jyoti Marg	-	210	210		210	210				
38	R63 (DSP Road)	DSP Road	420	420	420		420	420				
39	R90	Shakti Marg	450	380	380		380	380				
40	R77	Arniko Marg	80	80	80		80	80				
41	R76	Mitra Marg	270	270	270		270	270				
42	R18 3	Nava Jyoti Marg	240	240	240		240	240				
43	T1 L16 B	Xenial Front	210	210	210		210	210				
44	T1 L16 A	Xenial South	140	140	140		140	140				
45	R11 4	Dharanidhar Marg	560	560	560		560	560	560	560		
46	R11 3	Kavi Lekh Marg	740	740	740		740	740	740	740		
47	R5a		370	370	370		370	560				



48	Rani site B		600	520	520		520	740				
	<b>Total</b>				<b>23444.7</b>	<b>932.6</b>	<b>24377</b>	<b>24153.7</b>	<b>18398.1</b>	<b>14167.5</b>	<b>200</b>	

SN	Road Number	Name of Road	Type*	Length in m					Footpath		Remar
				Original	Revised	Progress		Cumulative			
						Previous	This Month				
1	B2	Gauri Shankar Marg	Precast block	2777.83	2777.83		900	900	900		

Table No:-4.1 Road improvement Works (Work Progress till the date)

SN	Description	Unit	Proposed	Total Up to Previous Month	This Month	Total Up to this Month	Progress
1	Subgrade	m	73,860.00	23,444.7	932.60	24377.3	33.00%
2	Sub Base	m	73,860.00	23520.1	633.60	24153.7	32.70%
3	Base	m	73,860.00	18398.1	-	18398.1	26.19%
4	Prime	m	73,860.00	14167.5	-	14167.5	19.18%
5	Asphalt	m	73,860.00	14167.5	-	14167.5	19.18%

## 3.4 ROAD SIDE DRAIN

Table No:-4a PROPOSED and PHYSICAL PROGRESS of Road side drain works till August, 2018.

SN	Road Number	Name of Road	Length in m					Work Completed		Remarks
			Original	Revised	Progress		Total	Brick	RCC	
					Previous	This Month		m	m	
1	B1	Kanchan Marg	0	0	90	0	90	90		
2	R29	Shanti Marg	620	620	513.4		513.4	513.4		
3	N36		0	0	371.75		371.75	371.75		
4	R8	APF	540	540	460		460	460		



5	R7	Pasang Marg and Pipal Marg	480	480	180	50	230	230		
6	R63	DSP Road			397		397	397		
7.1	R9	Baglamu khi path	240	240	208		208	208		
7.2	S13			110	110		110	110		
8	N33	Parichaya Marga	0	0	70		70	70		
9	R28	Pustakalaya Marg		640	278		278	278		
10	R90	Shakti Marg	620	620	678.5		678.5	678.5		
11	R114	Dharanidhar Marg		530	624.65		624.65	624.65		
12	R11	Om Shiv Marg			376.9		376.9	376.9		
13	R18			762	762		762	762		
14	R17			680	721.7		721.7	721.7		
15	R113	Kavi Lekhnath Marg	0	0	312.45		312.45	312.45		
16	R77	Arniko Marg	160	160	160		160	160		
17	R76	Mitra Marg	540	540	548.1		548.1	548.1		
18	N9	Devi Marga		445	445		445	445		
19	N4			250	292.75		292.75	292.75		
20	R33	Tarun Marg		354	332.6	100	432.6	432.6		
21	R36	Gaurav Marg	450	450	432.9		432.9	432.9		
22	R86	Janpath Marg	400	400	367.4		367.4	367.4		
23	R183	Nava Jyoti Marg	440	440	422.1		422.1	422.1		
24	R7a		132	132	130		130	130		
25	Rani	Rani B		340	699.6		699.6	699.6		
26	Rani	Rani A		200	270		270	270		
27	N3			450	190		190	190		
28	N5			76	130		130	130		



29	R21	Binayak Marga		414	360	30	390	390		
30	R2	Main Road			1135	50	1185	1185		
31	Xenial Front (T1L16 B)			440	411.35		411.35	411.35		
32	Xenial South(T 1L16A)				318.6		318.6	318.6		
33	R75	Tintoliya Marga	135	135	255		255	255		
34	R122	Amar Marga	268	268	500.95		500.95	500.95		
35	N5			130	130		130	130		
36	R7b	Siddhartha Marga	110	110	110		110	110		
37	R12	Sukra Path	830	830	110	130	240	240		
38	R42	Jahada Marga	150	150	150		150	150		
39	R6	Shanti Marg	680	680	680		680	680		
40	R21(a)	DharamB adh Junction	160	160	160		160	160		
41	R78	Binayak Marga	70	70	70		70	70		
42	R188	Shakti Marg	120	120	115.6		115.6	115.6		
43	R40	Brahma Kumari Marga	600	600	600		600	600		
44	Rani Site C				97.5		97.5	97.5		
45	Ranit Site D				131.45		131.45	131.45		
46	T3L21	Moti Marga		800	570	100	670	670		
47	T3L39	Gaheli Marga		600	390	130	520	520		
48	T2L27	Bhumi Prashasan Junction	120	120	90	30	120	120		





49	T4 Line 1	Sailesh Marg	193	193		200	200	200		
50	N2			75.84		80	80	80		
51	T2 Line 26E	College Road	150	150		150	150	150		
52	T2 Line 18C		105	105		100	100	100		
53	T2Line 18A	Lord Buddha	94	94		94	94	94		
54	R6	Shahi Marg		800					920	
	<b>Total</b>				<b>16960.25</b>	<b>1244</b>	<b>18204.25</b>	<b>18204.25</b>	<b>920</b>	

### 3.5 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.

#### **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.

#### **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.

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

Various works defined under this item are related to provision a maintenance camps for work person and employees, Contractor’s site office, stores equipment yards and workshops. The camps must be adequate rain roof, Spacious, airy, and hygienic with proper lighting and material storage facilities. The area shall be kept neat and clean etc.

#### **Provision and maintenance of Toilets.**

Provision of toilets for labour 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 of pit type latrines. Sufficient water must be provided and maintained in the toilets.



**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 shall be fitted to the crusher to control emission of dust from the plant etc.

**Hot mix 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.

**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 environmental improvement project and mainly constitutes works on 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, 2054 BS, 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 on IEE was submitted and MoUD had approved the IEE on May14, 2013.

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 inhabitants 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 regularly and a standard site specific environmental monitoring checklist was used to record the present status of the project and verified whether or not the EMP is compiled. A sample of environmental checklist is attached herewith as Annex.

### 3.6 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 labours 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.

**Safeguard/ GESI Component****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.

#### **Grievance Redresses Mechanism:**

Total Four minor grievances have been registered in the GRC desk during May, 2018. The GRC committee has been addressed immediately registered Grievances and concerns raised by the concerned Stakeholders including Project beneficiaries.

#### **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 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.

#### **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 dated 30th May, 2018 and 31st May, 2018 following issues were discovered.

- i. The use of Personal Protection Equipment (PPE) were in very few usage thus the issue was considered unsatisfactory.
- ii. Proper Barricade was not done as well as caution signs and signals were not sufficiently used in Drainage and Sewer work Locations.

Considering above mentioned issues, the Contractor was instructed to use PPE, Barricades and proper signs and signals at working site. The implementation of Social and Environmental Safegurd measures during this month was found partially satisfactory.

#### **Status of Relocation of Services**

Relocation of Electric poles was done at R90, Rani and B1 Road. Similarly, relocation of water supply pipe lines were done at various locations at R6, R2, T3 Line 39, T3 Line 21, N2, and R84

#### **Status of Labour at Site**

LABOUR CLASS	SKILLED	UNSKILLED	MAL E	FEMAL E	JANJATI	DALIT	MUSLIM	MADHESI	BRAHMIN/CHHETRI
LOCAL	111	190	294	7	92	50	0	159	0
NON LOCAL	6	0	6	0	6				
INDIAN	14	27	41	0	31		10		
<b>TOTAL</b>	<b>131</b>	<b>217</b>	<b>341</b>	<b>7</b>	<b>129</b>	<b>50</b>	<b>10</b>	<b>159</b>	<b>0</b>



### 3.7 FINANCIAL PLAN

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

#### 3.7.1 DISBURSEMENT RECORDS IN CONSTRUCTION

**Table:-5 DISBURSEMENT RECORDS in CONSTRUCTION**

S.No	Description	Submission date	Submitted Amount(NRs)	Remarks
1	IPC 01	15 <sup>th</sup> October 2017	339,105,000.00	Mobilisation Advance
2	IPC02	2nd April 2018	265,347,611.64	
3	IPC 03	1 <sup>st</sup> July 2018	330,992,079.47	

## 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

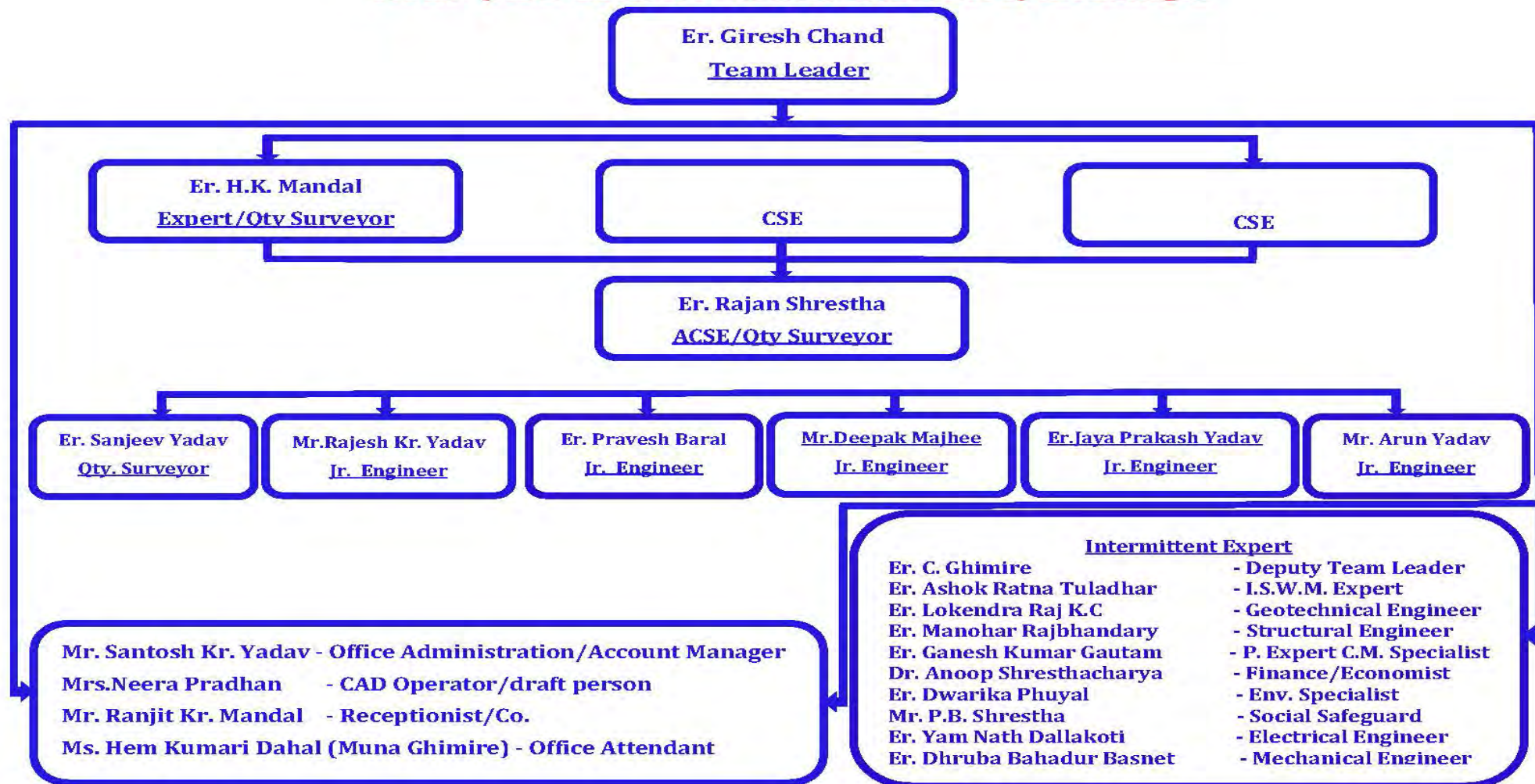
Attached





## **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 6: CONSULTANT'S STAFF at Project Site, Biratnagar**

SN	Name	Designation	Joining date	Remarks
1	Giresh Chand	Team Leader	6 <sup>th</sup> Sep 2017	
2	Ashok Ratna Tuladhar	ISWM ( Designer)	6 <sup>th</sup> Sep 2017	Intermittent
3	Dwarika Phuyal	Environmental Safeguard Expert	1 Nov 2017	Intermittent
4	Prakash Bhakata Shrestha	Social Safeguard Monitoring Expert	26 <sup>th</sup> dec-2017	Intermittent
5	Hare Krishna Mandal	Expert/Quantity surveyor	1 <sup>st</sup> Nov 2017	
6	J.P Yadav	Construction Supervision Engineer	1 <sup>st</sup> March 2018	Discontinued the service since 25 <sup>th</sup> April, 2018.
7	A.K Gupta	Construction Supervision Engineer	1 <sup>st</sup> March 2018	
8	Nishant K.C.	Construction Supervision Engineer	2 <sup>nd</sup> April 2018	Discontinued the service since 1 <sup>st</sup> August, 2018.
9	Rajan Shrestha	ACSE/Quantity Surveyor	7 <sup>th</sup> Nov 2017	
10	Rajesh Kumar Yadav	Junior Engineer-1	6 <sup>th</sup> Sep 2017	
11	Sanjeev Yadav	Qty Surveyor	5 <sup>th</sup> Nov 2017	
12	Santosh Kumar Yadav	Office Administration/Account Manager	6 <sup>th</sup> Sep 2017	
13	Hem Kumari Dahal (Muna Ghimire)	Office Attendant	6 <sup>th</sup> Sep 2017	
14	Ranjit Kumar Mandal	Receptionist	10 <sup>th</sup> Dec 2017	
15	Pravesh Baral	Junior Engineer-2	10 <sup>th</sup> Dec 2017	
16	J.P Yadav	Junior Engineer-3	1 <sup>st</sup> March 2018	
17	Deepak Majhi	Junior Engineer-4	1 <sup>st</sup> March 2018	
18	Arun Kumar Yadav	Junior Engineer-5	16 <sup>th</sup> March 2018	



SN	Name	Designation	Joining date	Remarks
19	Neera Pradhan	CAD operator/Draft Person	10 <sup>th</sup> Dec 2017	
20	Ramji Ghimire	Driver	1st Dec-2017	

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.

As per Clause 1.8.2 Engineer has given early notice to the contractor for identification and sample of all construction material before starting any kind of works. Contractor has identified and submitted their requisition for sampling of materials. Sampling works of all construction materials have completed. Team leader has recommended their letter for required tests for authorized organizations. Some test reports have been submitted by the Contractor which has been tested from outside of authorized organization. Engineer has emphasized 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, man whole etc.) and production is going on.

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

5.2 TL discussed during monthly progress meeting and given guidance for making certain modification and review on submitted work program and QAP. Contractor agreed for review/modification and resubmission on work program / QAP.

### 5.2 Progress Achieved Till date

Month	Target This Month		Achievement This Month		Leading		Lagging		Remarks
	Monthl y	Accumula ted	Monthl y	Accumulated	Monthly	Accumula ted	Monthl y	Accum ulated	
May-18	5.17%	24.88%	4.57%	22.07%			-0.60%	-2.81%	Lagging
June-18	0.15%	25.03%	2.32%	24.40%	2.18%			-0.63%	Lagging
July-18	0.15%	25.17%	0.78%	25.18%	0.63%	0.01%			Leading
August-18	0.15%	25.32%	2.32%	27.50%	2.17%	2.18%			Leading

### 5.3 Key Events

The consultant has noted the following key dates for the month of August, 2018.

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

S. No.	Date	Activities/Events	Remarks
	<b>Weather Reports</b>		
1	Wednesday, August 1, 2018	Activities Disturbed due to Rainfall	
2	Thursday, August 30, 2018	Activities Disturbed due to Rainfall	
	<b>Strike</b>		
3	Monday, August 30, 2018	Bandha called by Netra Bikram Chand,Biplap	
	<b>Site visits</b>		
4	August 19,2018	Site visit made by Secretary and DG of DUDBC	



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S. No.	Date	Activities/Events	Remarks
5	August 22,2018	Meeting with PMSC held at TL office followed by site visit and meeting with Employer and contractor	
6		Officials of Project Implementation Unit(PIU) have conducted frequent visit to the site during the month of August, 2018	
7		Due to Socio Environment Problem, the consultant is not able to process for design of Integrated Solid Waste Management (ISWM) as per discussion. Employer took initiation to solve the problem of ISWM.	

Weather Reports sourced by:

<https://www.timeanddate.com/weather/nepal/biratnagar/historic?month=6&year=2018>

Station Located at Biratnagar Airport

## 6 DETAILS OF PRE CAST ACTIVITIES.

Table 9: PHYSICAL PROGRESS in PRODUCTION OF PRECAST ITEMS till, August, 2018

Physical Progress till August 2018							
S.N.	Description	Unit	Progress			Total to Date (RM.)	Remarks
			BoQ	Up to Previous month (RM.)	This Month (RM.)		
1	Precast Slab	No		29,606.00	2,000.00	31,606.00	Under progress
2	Kerb Stone	Rm	147,729.68	53,185.00	6,100.00	59,285.00	40.13%

Table 10: PHYSICAL PROGRESS in PRODUCTION OF RCC Hume Pipe at Itahari till, August, 2018

Physical Progress till August- 2018							
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>						

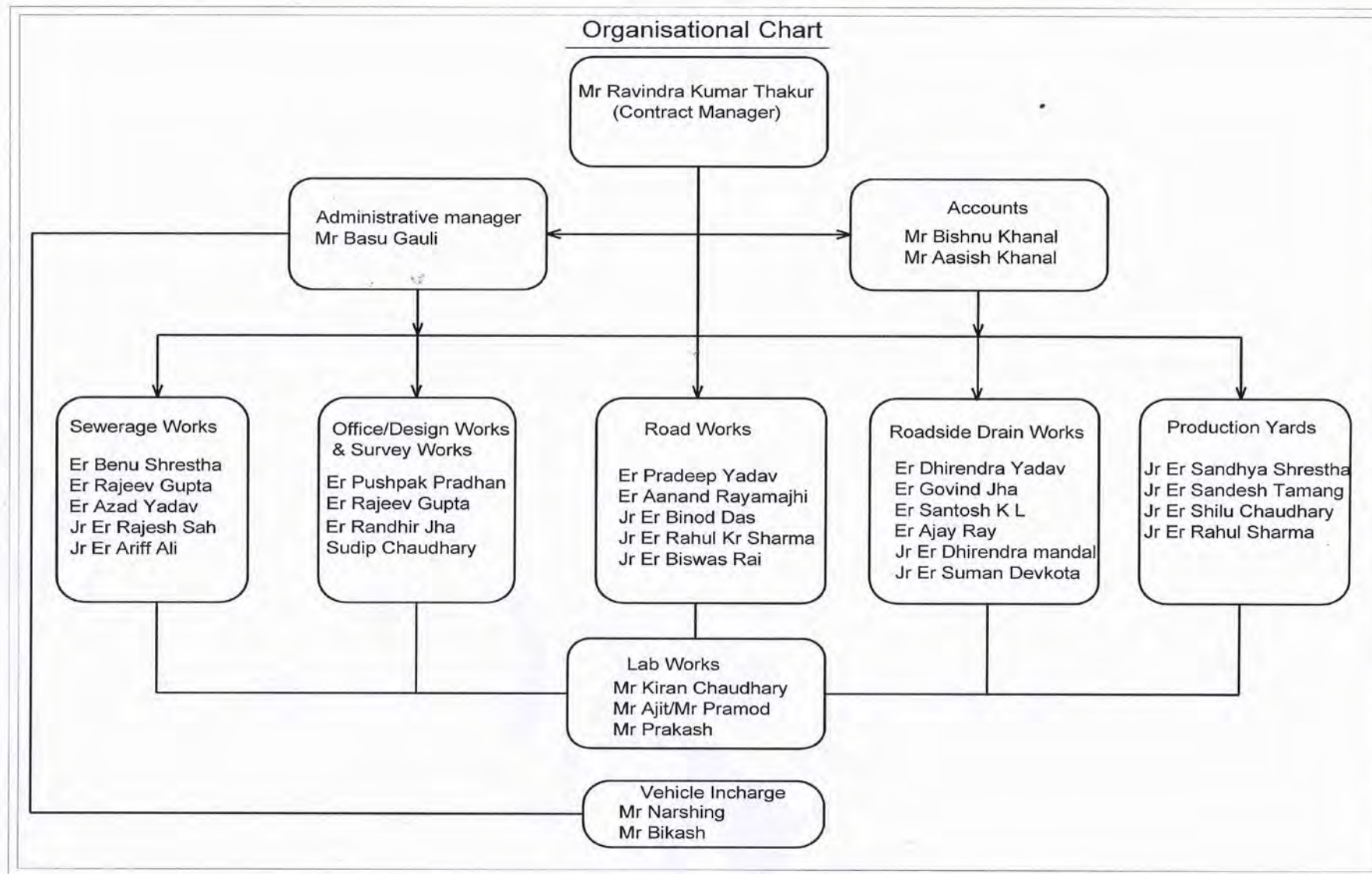
Table 11: PHYSICAL PROGRESS in PRODUCTION OF HDPE Pipe till, August, 2018

Physical Progress till August- 2018							
S.N.	Description	Diameter (mm)	Progress			Total to Date (RM.)	Remarks
			BoQ (RM)	Up to Previous month (RM.)	This Month (RM.)		
1	HDPE Pipe	110.00	1,987.20	1,987.20	-	1,987.20	Under process
2	HDPE Pipe	200.00	16,656.00	10,500.00	-	10,500.00	
3	HDPE Pipe	250.00	115.00	450.00	-	450.00	
Total							

Table 12: PHYSICAL PROGRESS in PRODUCTION OF UPVC Pipe till, August, 2018

Physical Progress till August- 2018							
S.N.	Description	Diameter (mm)	Progress			Total to Date (RM.)	Remarks
			BoQ (RM)	Up to Previous month (RM)	This Month (Rm.)		
1	UPVC Pipe	160.00	5,050.00	4,500.00	-	4,500.00	
2	UPVC Pipe	200.00	5,050.00	4000.00	-	4,000.00	





## 7 CONTRACTOR'S MANPOWER

Table 13: CONTRACTOR'S KEY STAFFS in August, 2018

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	-	18	
9	Accountant	-	2	
10	Lab Technician	-	1	
11	Store Keeper	-	2	
12	Vehicle Incharge	-	2	
13	Skilled Labors		131	
14	Unskilled Labors		217	



## 8 CONTRACTOR'S EQUIPMENT

**Table 12: CONTRACTOR'S EQUIPMENT**

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



S.No	Equipment Type and Characteristics	Min Number required as per Contract	ZHONGHENG CONSTRUCTION Group	Remarks
23	Concrete pump	1	-	
24	Drain cleaner/ Nala cleaner	2	-	
25	Broomer	-	1	
26	Motor Bike	-	10	
27	Plate Compactor	-	4	
28	Water Pump	-	6	

## 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.
- Side drain works.
- Laying of kerb Stone, cover slab and interlocking tiles .
- Sewer inlet and House Connection works.



## ANNEX-1: PHOTOGRAPHS OF AUGUST, 2018







Sewer inlet work at R2



Sewer inlet works at T4 Line 1





Sewer inlet works at R2



Sewer inlet works





TL instructing at T3L23



Drain work at T4 Line 1





Drain works at R12



Drain works at T2Line 18A





Inter locking Tiles at B2



Inter locking Tiles at B2





Kerb stone works at Rani



Discussing with Employer on R2





Relocation of water supply pipes





Joint crushing of cube mould at Lab



Meeting with PMSC at TL Office, Biratnagar.

## ANNEX-2: MINUTES OF MEETING AUGUST, 2018





## 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

### MINUTES OF MEETING NO. – 15

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

**Date:** August 22, 2018

**Time:** 2:30 PM

**Venue:** TL Office, Biratnagar

#### Attendance

#### **Consultant: PMSC**

1. Mr. Yagya Bahadur Malla, Road Engineer
2. Mr. Mukunda N. Bhaidya, Drainage and Sanitation Engineer
3. Mr. Pitamber Rawal Chettri, Monitoring and Evaluation Expert
4. Mr. Prakash Panday, GESI and Social Development Expert

#### **Consultant: DSC**

1. Mr. Giresh Chand, Team Leader
2. Mr. H K Mandal, Expert/Quantity Surveyor
3. Mr. Rajan Shrestha, Engineer/ Quantity Surveyor
4. Mr. Deepak Majhee, Jr. Engineer

TL welcomed all participants in the meeting. Following matters were discussed and decided:

S.N.	Minutes	Action by
1.	<p>TL, Mr. Chand briefed about the present status of the project as follows:</p> <ol style="list-style-type: none"> <li>1) Road – 14.2 Km (Asphalt completed) against target 73.8 Km</li> <li>2) Road Side Drain- 17.8 Km completed against target 26.05 Km</li> <li>3) Sewer Line- 8.2 Km against target 20.08 Km</li> <li>4) Storm Water Drain- 560 m against target 585 m (Revised length)</li> </ol> <p>The progress upto 21 August 2018 is 27.35 % against the target of 25.32 % i.e, lead by 2.03%.</p> <p>He further said that the contractor can complete the work in stipulated time if the problem of RoW is cleared.</p>	Employer/ DSC





## 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



2.	<p>PMSC appreciated the Monthly Progress Report (MPR) submitted and suggested to further incorporate followings details to make more informative;</p> <p>Relocation of water supply pipes, electric poles, telephone lines, footpath, capacity building trainings, equal wage payment, IPC submission/Recommendation date, etc</p> <p>TL made clear about all above issues and further agreed to incorporate in incoming MPR as stated.</p>	PMSC/DSC
3.	<p>TL informed that the process of subcontracting is under process as per contract.</p> <p>Regarding manhole, the manhole level is kept to the level of subbase previously anticipating the smooth flow of traffic but now they have been raised as per design.</p> <p>PMSC agreed on the same.</p>	DSC/ Contractor
4.	<p>PMSC enquired about the further problems during the work at site.</p> <p>TL informed that due to Socio Environmental problem, the design of Integrated Solid Waste Management (ISWM) could not be submitted as per ToR which have already been informed to the Employer (PIU) verbally as well as written. He further informed that the inception report and Stake holders Analysis, Communication Strategy and Consultation Plan for ISWM have already been submitted.</p> <p>He also informed the problem of RoW and shut down problem from NEA are hindering to complete the work in stipulated time.</p>	Employer/ DSC/ Contractor
5.	<p>Finally, the meeting was concluded with joint visit to the site and hold meeting with the employer and the contractor next day (23<sup>rd</sup> August 2018 @ 4:00 PM)</p>	PMSC/DSC





## REGIONAL URBAN DEVELOPMENT PROJECT (RUDP)

RUDP/ICB/BRT/2

## Meeting Attendance

Date: 22-Aug-18

Venue: TL office, Birat

S.N.	Name	Designation	Organization	Signature
1	Girish Chandra	TL	BDA	
2	Yagya Malla	Road Engineer	PMC/RUDP	
3	Pitarabher Karmal Chhetri	M&E expert	PMC	
4	Mukunda N. Baigra	Range Engr	"	
5	Prakash Panday	GESI & Social Dev. Expert	PMC/RUDP	
6	Rajan Shrestha	Engineer	DSC/BDA	
7	Hare Krishna Mauda	Asst. Surgeon	BDA	
8	Deepak Mayhee	Jr. Engineer	BDA	
9				
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ANNEX-3: LABORATORY TEST RESULTS OF AUGUST, 2018  
**Attached**





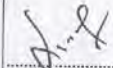



## REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

## Summary Sheet of Concrete Cube Test Report

							Month		August		
							Year		2018		
							Type of Material		Conc. Cube		
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand+Agg.	Date of Casting	Date of Testing		Strength, N/mm2		Concrete Grade
							7 Days	28 Days	7 Days	28 Days	
36	Madhumara Yard	RUDP-602	Salimar	OPC	Chisang Khola	16-Jul-18	23-Jul-18	13-Aug-18		32.81	M30
37	R-6	RUDP-603	Salimar	OPC	Chisang Khola	17-Jul-18	24-Jul-18	14-Aug-18		21.07	M20
38	DDC Yard	RUDP-604	Salimar	OPC	Chisang Khola	17-Jul-18	24-Jul-18	14-Aug-18		22.73	M20
39	R-11	RUDP-605	Salimar	OPC	Chisang Khola	17-Jul-18	24-Jul-18	14-Aug-18		21.98	M20
40	R-21	RUDP-606	Salimar	OPC	Chisang Khola	17-Jul-18	24-Jul-18	14-Aug-18		22.13	M20
41	R-2 (Branch Road)	RUDP-607	Salimar	OPC	Chisang Khola	17-Jul-18	24-Jul-18	14-Aug-18		23.03	M20
42	Madhumara Yard	RUDP-608	Salimar	OPC	Chisang Khola	18-Jul-18	25-Jul-18	15-Aug-18		32.74	M30
43	DDC Yard	RUDP-609	Salimar	OPC	Chisang Khola	18-Jul-18	25-Jul-18	15-Aug-18		32.66	M30
44	R-21	RUDP-610	Salimar	OPC	Chisang Khola	19-Jul-18	26-Jul-18	16-Aug-18		23.66	M20
45	R-2 (Branch Road)	RUDP-611	Salimar	OPC	Chisang Khola	19-Jul-18	26-Jul-18	16-Aug-18		23.63	M20
46	R-11	RUDP-612	Salimar	OPC	Chisang Khola	20-Jul-18	27-Jul-18	17-Aug-18		21.90	M20
47	Cn2Cn3	RUDP-613	Salimar	OPC	Chisang Khola	21-Jul-18	28-Jul-18	18-Aug-18		23.86	M20
48	DDC Yard	RUDP-614	Salimar	OPC	Chisang Khola	22-Jul-18	29-Jul-18	19-Aug-18		21.67	M20
49	N-2	RUDP-615	Salimar	OPC	Chisang Khola	23-Jul-18	30-Jul-18	20-Aug-18		23.48	M20
50	R-6	RUDP-616	Salimar	OPC	Chisang Khola	23-Jul-18	30-Jul-18	20-Aug-18		22.95	M20
51	R-11	RUDP-617	Salimar	OPC	Chisang Khola	23-Jul-18	30-Jul-18	20-Aug-18		22.28	M20
52	R-6	RUDP-618	Salimar	OPC	Chisang Khola	24-Jul-18	31-Jul-18	21-Aug-18		24.01	M20
53	R-6	RUDP-619	Salimar	OPC	Chisang Khola	24-Jul-18	31-Jul-18	21-Aug-18		23.78	M20
54	R-11	RUDP-620	Salimar	OPC	Chisang Khola	24-Jul-18	31-Jul-18	21-Aug-18		25.93	M20
55	DDC Yard	RUDP-621	Salimar	OPC	Chisang Khola	1-Aug-18	8-Aug-18	29-Aug-18	15.59	21.90	M20
56	DDC Yard	RUDP-622	Salimar	OPC	Chisang Khola	1-Aug-18	8-Aug-18	29-Aug-18	22.05	32.01	M30
57	Madhumara Yard	RUDP-623	Salimar	OPC	Chisang Khola	1-Aug-18	8-Aug-18	29-Aug-18	21.52	31.55	M30
58	R-6	RUDP-624	Salimar	OPC	Chisang Khola	2-Aug-18	9-Aug-18	30-Aug-18	15.37	22.35	M20
59	Madhumara Yard	RUDP-625	Salimar	OPC	Chisang Khola	2-Aug-18	9-Aug-18	30-Aug-18	21.22	32.57	M30
60	DDC Yard	RUDP-626	Salimar	OPC	Chisang Khola	2-Aug-18	9-Aug-18	30-Aug-18	21.07	32.38	M30
61	R-6	RUDP-627	Salimar	OPC	Chisang Khola	2-Aug-18	9-Aug-18	30-Aug-18	12.12	16.41	M15
62	R-6	RUDP-628	Salimar	OPC	Chisang Khola	3-Aug-18	10-Aug-18	31-Aug-18	11.97	16.48	M15
63	N-2	RUDP-629	Salimar	OPC	Chisang Khola	3-Aug-18	10-Aug-18	31-Aug-18	16.93	22.65	M20
64	DDC Yard	RUDP-630	Salimar	OPC	Chisang Khola	3-Aug-18	10-Aug-18	31-Aug-18	15.66	23.03	M20
65	R-6	RUDP-631	Salimar	OPC	Chisang Khola	3-Aug-18	10-Aug-18	31-Aug-18	14.84	22.95	M20
66	R-6	RUDP-632	Salimar	OPC	Chisang Khola	3-Aug-18	10-Aug-18	31-Aug-18	12.49	17.08	M15
67	R-6	RUDP-633	Salimar	OPC	Chisang Khola	4-Aug-18	11-Aug-18	1-Sep-18	11.30		M15
68	R-6	RUDP-634	Salimar	OPC	Chisang Khola	4-Aug-18	11-Aug-18	1-Sep-18	15.89		M20
70	DDC Yard	RUDP-635	Salimar	OPC	Chisang Khola	4-Aug-18	11-Aug-18	1-Sep-18	21.22		M30
71	DDC Yard	RUDP-636	Salimar	OPC	Chisang Khola	5-Aug-18	12-Aug-18	2-Sep-18	15.37		M20
Contractor						Consultant					
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						 Submitted By Contract Manager					
						 Verified By Qty Engineer/CSE					
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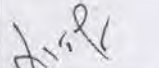


## REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City


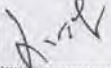

Contract No:- RUDP/ICB/BRT-02

## 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		August	
							Year		2018	
							Type of Material		Conc. Cube	
							Date of Testing		Strength, N/mm2	
							7 Days	28 Days	7 Days	28 Days
72	R-2	RUDP-637	Salimar	OPC	Chisang Khola	5-Aug-18	12-Aug-18	2-Sep-18	16.41	M20
73	R-6	RUDP-638	Salimar	OPC	Chisang Khola	5-Aug-18	12-Aug-18	2-Sep-18	12.35	M15
74	Madhumara Yard	RUDP-639	Salimar	OPC	Chisang Khola	5-Aug-18	12-Aug-18	2-Sep-18	22.13	M30
75	N-4	RUDP-640	Salimar	OPC	Chisang Khola	5-Aug-18	12-Aug-18	2-Sep-18	14.99	M20
76	R-6	RUDP-641	Salimar	OPC	Chisang Khola	6-Aug-18	13-Aug-18	3-Sep-18	11.30	M15
77	DDC-Yard	RUDP-642	Salimar	OPC	Chisang Khola	6-Aug-18	13-Aug-18	3-Sep-18	15.22	M20
78	Madhumara Yard	RUDP-643	Salimar	OPC	Chisang Khola	6-Aug-18	13-Aug-18	3-Sep-18	21.52	M30
79	Madhumara Yard	RUDP-644	Salimar	OPC	Chisang Khola	6-Aug-18	13-Aug-18	3-Sep-18	21.90	M30
80	DDC-Yard	RUDP-645	Salimar	OPC	Chisang Khola	7-Aug-18	14-Aug-18	4-Sep-18	22.80	M30
81	DDC-Yard	RUDP-646	Salimar	OPC	Chisang Khola	7-Aug-18	14-Aug-18	4-Sep-18	15.14	M20
82	R-6	RUDP-647	Salimar	OPC	Chisang Khola	7-Aug-18	14-Aug-18	4-Sep-18	11.75	M15
83	R-74	RUDP-648	Salimar	OPC	Chisang Khola	7-Aug-18	14-Aug-18	4-Sep-18	15.07	M20
84	R-6	RUDP-649	Salimar	OPC	Chisang Khola	8-Aug-18	15-Aug-18	5-Sep-18	12.64	M15
85	T2L26E	RUDP-650	Salimar	OPC	Chisang Khola	8-Aug-18	15-Aug-18	5-Sep-18	16.26	M20
86	T3L23	RUDP-651	Salimar	OPC	Chisang Khola	8-Aug-18	15-Aug-18	5-Sep-18	15.37	M20
87	Madhumara Yard	RUDP-652	Salimar	OPC	Chisang Khola	8-Aug-18	15-Aug-18	5-Sep-18	21.75	M30
88	Madhumara Yard	RUDP-653	Salimar	OPC	Chisang Khola	8-Aug-18	15-Aug-18	5-Sep-18	22.50	M30
89	T2L26E	RUDP-654	Salimar	OPC	Chisang Khola	9-Aug-18	16-Aug-18	6-Sep-18	15.96	M20
90	R-74	RUDP-655	Salimar	OPC	Chisang Khola	9-Aug-18	16-Aug-18	6-Sep-18	14.55	M20
91	R-6	RUDP-656	Salimar	OPC	Chisang Khola	9-Aug-18	16-Aug-18	6-Sep-18	11.68	M15
92	DDC-Yard	RUDP-657	Salimar	OPC	Chisang Khola	9-Aug-18	16-Aug-18	6-Sep-18	14.62	M20
93	DDC-Yard	RUDP-658	Salimar	OPC	Chisang Khola	9-Aug-18	16-Aug-18	6-Sep-18	21.60	M30
94	R-2(Branch Road)	RUDP-659	Salimar	OPC	Chisang Khola	9-Aug-18	16-Aug-18	6-Sep-18	14.02	M20
95	Madhumara Yard	RUDP-660	Salimar	OPC	Chisang Khola	10-Aug-18	17-Aug-18	7-Sep-18	22.13	M30
96	DDC-Yard	RUDP-661	Salimar	OPC	Chisang Khola	10-Aug-18	17-Aug-18	7-Sep-18	22.35	M30
97	R-6	RUDP-662	Salimar	OPC	Chisang Khola	10-Aug-18	17-Aug-18	7-Sep-18	12.61	M15
98	R-2	RUDP-663	Salimar	OPC	Chisang Khola	10-Aug-18	17-Aug-18	7-Sep-18	16.04	M20
99	R-6	RUDP-664	Salimar	OPC	Chisang Khola	11-Aug-18	18-Aug-18	8-Sep-18	12.49	M15
100	R-74	RUDP-665	Salimar	OPC	Chisang Khola	12-Aug-18	19-Aug-18	9-Sep-18	15.14	M20
101	T2L18A	RUDP-666	Salimar	OPC	Chisang Khola	12-Aug-18	19-Aug-18	9-Sep-18	14.47	M20
102	DDC-Yard	RUDP-667	Salimar	OPC	Chisang Khola	13-Aug-18	20-Aug-18	10-Sep-18	15.22	M20
103	R-6	RUDP-668	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	11.97	M15
104	T3L39	RUDP-669	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	14.84	M20
105	R-6	RUDP-670	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	11.68	M15
Contractor						Consultant				
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						 Submitted By Contract Manager				
						 Verified By Qty Engineer/CSE				
						 Approved By Team Leader				





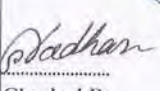

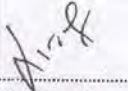
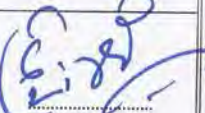
REGIONAL URBAN DEVELOPMENT PROJECT											
Biratnagar Metropolitan City											
Contract No:- RUDP/ICB/BRT-02											
Summary Sheet of Concrete Cube Test Report											
							Month		August		
							Year		2018		
							Type of Material		Conc. Cube		
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand+Agg.	Date of Casting	Date of Testing		Strength, N/mm <sup>2</sup>		Concrete Grade
							7 Days	28 Days	7 Days	28 Days	
106	R-12	RUDP-671	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	14.69		M20
107	DDC-yard	RUDP-672	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	15.52		M20
108	DDC-yard	RUDP-673	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	22.20		M30
109	Madhumara Yard	RUDP-674	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	22.88		M30
110	R-12	RUDP-675	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	15.07		M20
111	R-6	RUDP-676	Salimar	OPC	Chisang Khola	16-Aug-18	23-Aug-18	13-Sep-18	12.05		M15
112	R-12	RUDP-677	Salimar	OPC	Chisang Khola	16-Aug-18	23-Aug-18	13-Sep-18	16.34		M20
113	R-2	RUDP-678	Salimar	OPC	Chisang Khola	16-Aug-18	23-Aug-18	13-Sep-18	14.69		M20
114	Madhumara Yard	RUDP-679	Salimar	OPC	Chisang Khola	16-Aug-18	23-Aug-18	13-Sep-18	21.90		M30
115	DDC-yard	RUDP-680	Salimar	OPC	Chisang Khola	16-Aug-18	23-Aug-18	13-Sep-18	22.95		M30
116	R-6	RUDP-681	Salimar	OPC	Chisang Khola	17-Aug-18	24-Aug-18	14-Sep-18	12.57		M15
117	T3L21	RUDP-682	Salimar	OPC	Chisang Khola	17-Aug-18	24-Aug-18	14-Sep-18	16.48		M20
118	DDC-yard	RUDP-683	Salimar	OPC	Chisang Khola	17-Aug-18	24-Aug-18	14-Sep-18	15.44		M20
119	Madhumara-yard	RUDP-684	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	22.28		M30
120	Madhumara-yard	RUDP-685	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	23.10		M30
121	T3L39	RUDP-686	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	15.44		M20
122	R-74	RUDP-687	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	14.69		M20
123	R-12	RUDP-688	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	15.52		M20
124	T3L18B	RUDP-689	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	14.69		M20
125	R-74	RUDP-690	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	15.07		M20
126	R-6	RUDP-691	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	11.68		M15
127	DDC-yard	RUDP-692	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	16.11		M20
128	DDC-yard	RUDP-693	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	21.52		M30
129	T3L26E	RUDP-694	Salimar	OPC	Chisang Khola	20-Aug-18	27-Aug-18	17-Sep-18	15.74		M20
130	Koshi-Yard	RUDP-695	Salimar	OPC	Chisang Khola	20-Aug-18	27-Aug-18	17-Sep-18	14.77		M20
131	R-12	RUDP-696	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	15.07		M20
132	R-74	RUDP-697	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	16.19		M20
133	R-2 (Branch Road )	RUDP-698	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	15.29		M20
134	T3L18A	RUDP-699	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	16.11		M20
135	Madhumara-yard	RUDP-700	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	22.20		M30
136	DDC-yard	RUDP-701	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	21.52		M30
137	Madhumara-yard	RUDP-702	Salimar	OPC	Chisang Khola	23-Aug-18	30-Aug-18	20-Sep-18	22.20		M30
138	DDC-yard	RUDP-703	Salimar	OPC	Chisang Khola	23-Aug-18	30-Aug-18	20-Sep-18	15.07		M20
Contractor						Consultant					
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 Checked By Engineer						 Submitted By Contract Manager					
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### Summary Sheet of Concrete Cube Test Report

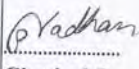
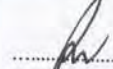

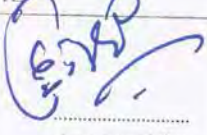




REGIONAL URBAN DEVELOPMENT PROJECT											
Biratnagar Metropolitan City											
Contract No:- RUDP/ICB/BRT-02											
Summary Sheet of Concrete Cube Test Report											
							Month		August		
							Year		2018		
							Type of Material		Conc. Cube		
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand+Agg.	Date of Casting	Date of Testing		Strength, N/mm <sup>2</sup>		Concrete Grade
							7 Days	28 Days	7 Days	28 Days	
1	T3L39	RUDP-568	Salimar	OPC	Chisang Khola	4-Jul-18	11-Jul-18	1-Aug-18		20.40	M20
2	Madhumara Yard	RUDP-569	Salimar	OPC	Chisang Khola	4-Jul-18	11-Jul-18	1-Aug-18		33.67	M30
3	T3L21	RUDP-570	Salimar	OPC	Chisang Khola	4-Jul-18	11-Jul-18	1-Aug-18		21.45	M20
4	R-6	RUDP-571	Salimar	OPC	Chisang Khola	5-Jul-18	12-Jul-18	2-Aug-18		17.84	M15
5	R-6	RUDP-572	Salimar	OPC	Chisang Khola	5-Jul-18	12-Jul-18	2-Aug-18		17.84	M15
6	DDC Yard	RUDP-573	Salimar	OPC	Chisang Khola	5-Jul-18	12-Jul-18	2-Aug-18		22.28	M20
7	Rani-Site	RUDP-574	Salimar	OPC	Chisang Khola	5-Jul-18	12-Jul-18	2-Aug-18		21.98	M20
8	R-2	RUDP-575	Salimar	OPC	Chisang Khola	5-Jul-18	12-Jul-18	2-Aug-18		21.83	M20
9	T3L21	RUDP-576	Salimar	OPC	Chisang Khola	5-Jul-18	12-Jul-18	2-Aug-18		22.05	M20
10	R-2	RUDP-577	Salimar	OPC	Chisang Khola	6-Jul-18	13-Jul-18	3-Aug-18		21.67	M20
11	R-40	RUDP-578	Salimar	OPC	Chisang Khola	6-Jul-18	13-Jul-18	3-Aug-18		21.90	M20
12	R-7	RUDP-579	Salimar	OPC	Chisang Khola	6-Jul-18	13-Jul-18	3-Aug-18		21.45	M20
13	R-2	RUDP-580	Salimar	OPC	Chisang Khola	8-Jul-18	15-Jul-18	5-Aug-18		21.22	M20
14	R-2	RUDP-581	Salimar	OPC	Chisang Khola	9-Jul-18	16-Jul-18	6-Aug-18		22.28	M20
15	R-6	RUDP-582	Salimar	OPC	Chisang Khola	9-Jul-18	16-Jul-18	6-Aug-18		17.91	M15
16	DDC Yard	RUDP-583	Salimar	OPC	Chisang Khola	9-Jul-18	16-Jul-18	6-Aug-18		32.80	M30
17	Madhumara Yard	RUDP-584	Salimar	OPC	Chisang Khola	9-Jul-18	16-Jul-18	6-Aug-18		32.74	M30
18	Madhumara Yard	RUDP-585	Salimar	OPC	Chisang Khola	9-Jul-18	16-Jul-18	6-Aug-18		34.64	M30
19	Rani-Site	RUDP-586	Salimar	OPC	Chisang Khola	10-Jul-18	17-Jul-18	7-Aug-18		22.13	M20
20	R-2 (Branch Road)	RUDP-587	Salimar	OPC	Chisang Khola	10-Jul-18	17-Jul-18	7-Aug-18		22.65	M20
21	Madhumara Yard	RUDP-588	Salimar	OPC	Chisang Khola	10-Jul-18	17-Jul-18	7-Aug-18		32.54	M30
22	R-2	RUDP-589	Salimar	OPC	Chisang Khola	11-Jul-18	18-Jul-18	8-Aug-18		23.18	M20
23	R-6	RUDP-590	Salimar	OPC	Chisang Khola	11-Jul-18	18-Jul-18	8-Aug-18		24.23	M20
24	R-6	RUDP-591	Salimar	OPC	Chisang Khola	12-Jul-18	19-Jul-18	9-Aug-18		18.01	M15
25	R-21	RUDP-592	Salimar	OPC	Chisang Khola	12-Jul-18	19-Jul-18	9-Aug-18		23.93	M20
26	Madhumara Yard	RUDP-593	Salimar	OPC	Chisang Khola	12-Jul-18	19-Jul-18	9-Aug-18		35.40	M30
27	R-6	RUDP-594	Salimar	OPC	Chisang Khola	12-Jul-18	19-Jul-18	9-Aug-18		23.48	M20
28	Rani-Site	RUDP-595	Salimar	OPC	Chisang Khola	12-Jul-18	19-Jul-18	9-Aug-18		23.41	M20
29	R-2	RUDP-596	Salimar	OPC	Chisang Khola	14-Jul-18	21-Jul-18	11-Aug-18		21.60	M20
30	DDC Yard	RUDP-597	Salimar	OPC	Chisang Khola	14-Jul-18	21-Jul-18	11-Aug-18		32.66	M30
32	DDC Yard	RUDP-598	Salimar	OPC	Chisang Khola	15-Jul-18	22-Jul-18	12-Aug-18		22.80	M20
33	Rani-Site	RUDP-599	Salimar	OPC	Chisang Khola	15-Jul-18	22-Jul-18	12-Aug-18		23.18	M20
34	Cn2Cn3	RUDP-600	Salimar	OPC	Chisang Khola	16-Jul-18	23-Jul-18	13-Aug-18		21.45	M20
35	DDC Yard	RUDP-601	Salimar	OPC	Chisang Khola	16-Jul-18	23-Jul-18	13-Aug-18		32.44	M30
Contractor						Consultant					
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						 Submitted By Contract Manager					
						 Verified By Qty Engineer/CSE					
						 Approved By Team Leader					




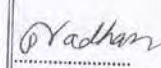

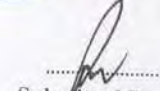
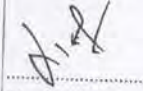
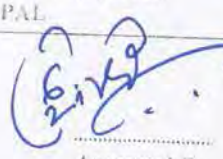
REGIONAL URBAN DEVELOPMENT PROJECT											
Biratnagar Metropolitan City											
Contract No:- RUDP/ICB/BRT-02											
Summary Sheet of Mortar Test Report											
							Month		August		
							Year		2018		
							Description of Sample		Brick Wall		
S.N.	Location	Lab Ref.no.	Type of Cement	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	
36	R-21	MR-371	Salimar	OPC	Chisang Khola	17-Jul-18	24-Jul-18	14-Aug-18		8.27	7.5
37	R-11	MR-372	Salimar	OPC	Chisang Khola	18-Jul-18	25-Jul-18	15-Aug-18		8.40	7.5
38	Rani Site	MR-373	Salimar	OPC	Chisang Khola	19-Jul-18	26-Jul-18	16-Aug-18		8.54	7.5
39	R-21	MR-374	Salimar	OPC	Chisang Khola	19-Jul-18	26-Jul-18	16-Aug-18		8.67	7.5
40	R-11	MR-375	Salimar	OPC	Chisang Khola	20-Jul-18	27-Jul-18	17-Aug-18		9.60	7.5
41	Rani Site	MR-376	Salimar	OPC	Chisang Khola	20-Jul-18	27-Jul-18	17-Aug-18		8.40	7.5
42	R-21	MR-377	Salimar	OPC	Chisang Khola	20-Jul-18	27-Jul-18	17-Aug-18		8.40	7.5
43	R-11	MR-378	Salimar	OPC	Chisang Khola	20-Jul-18	27-Jul-18	17-Aug-18		8.40	7.5
44	R-21	MR-379	Salimar	OPC	Chisang Khola	22-Jul-18	29-Jul-18	19-Aug-18		8.80	7.5
45	R-11	MR-380	Salimar	OPC	Chisang Khola	23-Jul-18	30-Jul-18	20-Aug-18		9.07	7.5
46	R-2	MR-381	Salimar	OPC	Chisang Khola	23-Jul-18	30-Jul-18	20-Aug-18		8.40	7.5
47	N-2	MR-382	Salimar	OPC	Chisang Khola	23-Jul-18	30-Jul-18	20-Aug-18		8.94	7.5
48	R-11	MR-383	Salimar	OPC	Chisang Khola	24-Jul-18	31-Jul-18	21-Aug-18		8.80	7.5
49	R-11	MR-384	Salimar	OPC	Chisang Khola	3-Aug-18	10-Aug-18	31-Aug-18	6.00	8.40	7.5
50	R-21	MR-385	Salimar	OPC	Chisang Khola	4-Aug-18	11-Aug-18	1-Sep-18	6.27		7.5
51	T3L21	MR-386	Salimar	OPC	Chisang Khola	4-Aug-18	11-Aug-18	1-Sep-18	5.47		7.5
52	T3L39	MR-387	Salimar	OPC	Chisang Khola	4-Aug-18	11-Aug-18	1-Sep-18	6.40		7.5
53	Rani-Site	MR-388	Salimar	OPC	Chisang Khola	5-Aug-18	12-Aug-18	2-Sep-18	5.87		7.5
54	R-21	MR-389	Salimar	OPC	Chisang Khola	5-Aug-18	12-Aug-18	2-Sep-18	5.33		7.5
55	T3L21	MR-390	Salimar	OPC	Chisang Khola	5-Aug-18	12-Aug-18	2-Sep-18	6.14		7.5
56	T3L39	MR-391	Salimar	OPC	Chisang Khola	5-Aug-18	12-Aug-18	2-Sep-18	5.87		7.5
57	T2L26E	MR-392	Salimar	OPC	Chisang Khola	5-Aug-18	12-Aug-18	2-Sep-18	6.40		7.5
58	R-21	MR-393	Salimar	OPC	Chisang Khola	6-Aug-18	13-Aug-18	3-Sep-18	6.40		7.5
59	N-2	MR-394	Salimar	OPC	Chisang Khola	6-Aug-18	13-Aug-18	3-Sep-18	5.47		7.5
60	Rani-Site	MR-395	Salimar	OPC	Chisang Khola	6-Aug-18	13-Aug-18	3-Sep-18	6.40		7.5
61	T2L26E	MR-396	Salimar	OPC	Chisang Khola	6-Aug-18	13-Aug-18	3-Sep-18	5.87		7.5
62	R-21	MR-397	Salimar	OPC	Chisang Khola	7-Aug-18	14-Aug-18	4-Sep-18	6.27		7.5
63	N-2	MR-398	Salimar	OPC	Chisang Khola	7-Aug-18	14-Aug-18	4-Sep-18	6.00		7.5
64	Rani-Site	MR-399	Salimar	OPC	Chisang Khola	7-Aug-18	14-Aug-18	4-Sep-18	6.54		7.5
65	T2L26E	MR-400	Salimar	OPC	Chisang Khola	7-Aug-18	14-Aug-18	4-Sep-18	5.60		7.5
66	N-2	MR-401	Salimar	OPC	Chisang Khola	8-Aug-18	15-Aug-18	5-Sep-18	6.40		7.5
67	Rani-Site	MR-402	Salimar	OPC	Chisang Khola	8-Aug-18	15-Aug-18	5-Sep-18	5.33		7.5
68	R-21	MR-403	Salimar	OPC	Chisang Khola	8-Aug-18	15-Aug-18	5-Sep-18	5.74		7.5
69	T2L26E	MR-404	Salimar	OPC	Chisang Khola	8-Aug-18	15-Aug-18	5-Sep-18	6.40		7.5
70	R-74	MR-405	Salimar	OPC	Chisang Khola	9-Aug-18	16-Aug-18	6-Sep-18	5.60		7.5

<b>Contractor</b> <b>ZHONGHENG CONSTRUCTION GROUP</b> <b>INTERNATIONAL ENGINEERING CO.</b> <b>LTD</b>	<b>Consultant</b> <b>BUILDING DESIGN AUTHORITY (P) LTD IN JOINT</b> <b>VENTURE WITH B.N. CONSULTANCY PVT. LTD AND</b> <b>PLUS ENGINEERS &amp; ARCHITECTS (P) LTD,</b> <b>KATHIMANDU, NEPAL</b>
 <b>Checked By</b> <b>Engineer</b>	 <b>Submitted By</b> <b>Contract Manager</b>
 <b>Verified By</b> <b>Qty Engineer/CSE</b>	 <b>Approved By</b> <b>Team Leader</b>





REGIONAL URBAN DEVELOPMENT PROJECT											
Biratnagar Metropolitan City											
Contract No:- RUDP/ICB/BRT-02											
Summary Sheet of Mortar Test Report											
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand	Date of Casting	Month		August		
							Year		2018		
							Description of Sample		Brick Wall		
							Date of Testing		Strength, N/mm <sup>2</sup>		
							7 Days	28 Days	7 Days	28 Days	Type of Grade
1	R-7	MR-336	Salimar	OPC	Chisang Khola	5-Jul-18	12-Jul-18	2-Aug-18		8.67	7.5
2	T3L39	MR-337	Salimar	OPC	Chisang Khola	5-Jul-18	12-Jul-18	2-Aug-18		9.07	7.5
3	R-2	MR-338	Salimar	OPC	Chisang Khola	5-Jul-18	12-Jul-18	2-Aug-18		7.74	7.5
4	T3L21	MR-339	Salimar	OPC	Chisang Khola	5-Jul-18	12-Jul-18	2-Aug-18		8.67	7.5
5	R-90	MR-340	Salimar	OPC	Chisang Khola	6-Jul-18	13-Jul-18	3-Aug-18		9.07	7.5
6	R-2	MR-341	Salimar	OPC	Chisang Khola	6-Jul-18	13-Jul-18	3-Aug-18		8.27	7.5
7	R-40	MR-342	Salimar	OPC	Chisang Khola	6-Jul-18	13-Jul-18	3-Aug-18		8.94	7.5
8	R-7	MR-343	Salimar	OPC	Chisang Khola	6-Jul-18	13-Jul-18	3-Aug-18		8.80	7.5
9	T3L21	MR-344	Salimar	OPC	Chisang Khola	7-Jul-18	14-Jul-18	4-Aug-18		9.07	7.5
10	N-2	MR-345	Salimar	OPC	Chisang Khola	7-Jul-18	14-Jul-18	4-Aug-18		8.67	7.5
11	R-2	MR-346	Salimar	OPC	Chisang Khola	8-Jul-18	15-Jul-18	5-Aug-18		9.60	7.5
12	T3L39	MR-347	Salimar	OPC	Chisang Khola	9-Jul-18	16-Jul-18	6-Aug-18		8.51	7.5
13	R-2	MR-348	Salimar	OPC	Chisang Khola	9-Jul-18	16-Jul-18	6-Aug-18		8.54	7.5
14	T3L21	MR-349	Salimar	OPC	Chisang Khola	9-Jul-18	16-Jul-18	6-Aug-18		8.80	7.5
15	T3L39	MR-350	Salimar	OPC	Chisang Khola	9-Jul-18	16-Jul-18	6-Aug-18		8.27	7.5
16	R-2	MR-351	Salimar	OPC	Chisang Khola	10-Jul-18	17-Jul-18	7-Aug-18		8.67	7.5
17	Rani Site	MR-352	Salimar	OPC	Chisang Khola	10-Jul-18	17-Jul-18	7-Aug-18		8.40	7.5
18	Rani Site	MR-353	Salimar	OPC	Chisang Khola	11-Jul-18	18-Jul-18	8-Aug-18		8.00	7.5
19	T3L39	MR-354	Salimar	OPC	Chisang Khola	11-Jul-18	18-Jul-18	8-Aug-18		8.14	7.5
20	R-2(Branch Road)	MR-355	Salimar	OPC	Chisang Khola	11-Jul-18	18-Jul-18	8-Aug-18		8.14	7.5
21	R-2(Branch Road)	MR-356	Salimar	OPC	Chisang Khola	11-Jul-18	18-Jul-18	8-Aug-18		8.40	7.5
22	T3L39	MR-357	Salimar	OPC	Chisang Khola	11-Jul-18	18-Jul-18	8-Aug-18		8.67	7.5
23	Rani Site	MR-358	Salimar	OPC	Chisang Khola	12-Jul-18	19-Jul-18	9-Aug-18		8.67	7.5
24	R-2	MR-359	Salimar	OPC	Chisang Khola	12-Jul-18	19-Jul-18	9-Aug-18		8.67	7.5
25	Rani Site	MR-360	Salimar	OPC	Chisang Khola	13-Jul-18	20-Jul-18	10-Aug-18		8.94	7.5
26	R-2(Branch Road)	MR-361	Salimar	OPC	Chisang Khola	14-Jul-18	21-Jul-18	11-Aug-18		8.40	7.5
27	Rani Site	MR-362	Salimar	OPC	Chisang Khola	14-Jul-18	21-Jul-18	11-Aug-18		8.94	7.5
28	R-2(Branch Road)	MR-363	Salimar	OPC	Chisang Khola	14-Jul-18	21-Jul-18	11-Aug-18		8.67	7.5
29	Rani Site	MR-364	Salimar	OPC	Chisang Khola	15-Jul-18	22-Jul-18	12-Aug-18		8.80	7.5
30	T3L39	MR-365	Salimar	OPC	Chisang Khola	15-Jul-18	22-Jul-18	12-Aug-18		8.80	7.5
31	Rani Site	MR-366	Salimar	OPC	Chisang Khola	15-Jul-18	22-Jul-18	12-Aug-18		8.94	7.5
32	R-2(Branch Road)	MR-367	Salimar	OPC	Chisang Khola	15-Jul-18	22-Jul-18	12-Aug-18		8.54	7.5
33	R-21	MR-368	Salimar	OPC	Chisang Khola	16-Jul-18	23-Jul-18	13-Aug-18		8.40	7.5
34	Rani Site	MR-369	Salimar	OPC	Chisang Khola	16-Jul-18	23-Jul-18	13-Aug-18		8.80	7.5
35	R-11	MR-370	Salimar	OPC	Chisang Khola	16-Jul-18	23-Jul-18	13-Aug-18		8.67	7.5

<b>Contractor</b> <b>ZHONGHENG CONSTRUCTION GROUP</b> <b>INTERNATIONAL ENGINEERING CO. LTD</b>   Checked By Engineer	<b>Consultant</b> <b>BUILDING DESIGN AUTHORITY (P) LTD IN JOINT</b> <b>VENTURE WITH B.N. CONSULTANCY PVT. LTD AND</b> <b>PLUS ENGINEERS &amp; ARCHITECTS (P) LTD,</b> <b>KATHMANDU, NEPAL</b>   Submitted By Contract Manager	 Verified By QTY Engineer/CSE	 Approved By Team Leader
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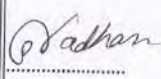
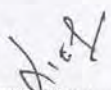

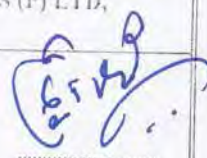


## REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Mortar Test Report

							Month		August	
							Year		2018	
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand	Date of Casting	Description of Sample		Brick Wall	
							Date of Testing		Strength, N/mm <sup>2</sup>	
							7 Days	28 Days	7 Days	28 Days
71	T3L23	MR-406	Salimar	OPC	Chisang Khola	9-Aug-18	16-Aug-18	6-Sep-18	6.14	7.5
72	T3L26E	MR-407	Salimar	OPC	Chisang Khola	9-Aug-18	16-Aug-18	6-Sep-18	6.67	7.5
73	T3L39	MR-408	Salimar	OPC	Chisang Khola	9-Aug-18	16-Aug-18	6-Sep-18	5.74	7.5
74	Rani-Site	MR-409	Salimar	OPC	Chisang Khola	10-Aug-18	17-Aug-18	7-Sep-18	6.27	7.5
75	T2L26E	MR-410	Salimar	OPC	Chisang Khola	10-Aug-18	17-Aug-18	7-Sep-18	5.33	7.5
76	R-74	MR-411	Salimar	OPC	Chisang Khola	10-Aug-18	17-Aug-18	7-Sep-18	6.14	7.5
77	Rani-Site	MR-412	Salimar	OPC	Chisang Khola	11-Aug-18	18-Aug-18	8-Sep-18	6.54	7.5
78	T2L26E	MR-413	Salimar	OPC	Chisang Khola	11-Aug-18	18-Aug-18	8-Sep-18	5.60	7.5
79	R-74	MR-414	Salimar	OPC	Chisang Khola	11-Aug-18	18-Aug-18	8-Sep-18	6.40	7.5
80	T3L23	MR-415	Salimar	OPC	Chisang Khola	11-Aug-18	18-Aug-18	8-Sep-18	5.87	7.5
81	R-74	MR-416	Salimar	OPC	Chisang Khola	12-Aug-18	19-Aug-18	9-Sep-18	5.33	7.5
82	R-2	MR-417	Salimar	OPC	Chisang Khola	12-Aug-18	19-Aug-18	9-Sep-18	6.40	7.5
83	Rani-Site	MR-418	Salimar	OPC	Chisang Khola	12-Aug-18	19-Aug-18	9-Sep-18	5.47	7.5
84	T3L23	MR-419	Salimar	OPC	Chisang Khola	13-Aug-18	20-Aug-18	10-Sep-18	6.14	7.5
85	T3L21	MR-420	Salimar	OPC	Chisang Khola	13-Aug-18	20-Aug-18	10-Sep-18	6.00	7.5
86	R-74	MR-421	Salimar	OPC	Chisang Khola	13-Aug-18	20-Aug-18	10-Sep-18	6.67	7.5
87	R-12	MR-422	Salimar	OPC	Chisang Khola	13-Aug-18	20-Aug-18	10-Sep-18	6.14	7.5
88	T3L23	MR-423	Salimar	OPC	Chisang Khola	14-Aug-18	21-Aug-18	11-Sep-18	5.87	7.5
89	Rani-Site	MR-424	Salimar	OPC	Chisang Khola	14-Aug-18	21-Aug-18	11-Sep-18	6.27	7.5
90	R-12	MR-425	Salimar	OPC	Chisang Khola	14-Aug-18	21-Aug-18	11-Sep-18	5.33	7.5
91	T3L39	MR-426	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	6.14	7.5
92	T3L21	MR-427	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	5.87	7.5
93	R-12	MR-428	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	6.14	7.5
94	T3L23	MR-429	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	6.67	7.5
95	R-74	MR-430	Salimar	OPC	Chisang Khola	15-Aug-18	22-Aug-18	12-Sep-18	5.74	7.5
96	R-2	MR-431	Salimar	OPC	Chisang Khola	16-Aug-18	23-Aug-18	13-Sep-18	5.87	7.5
97	R-74	MR-432	Salimar	OPC	Chisang Khola	16-Aug-18	23-Aug-18	13-Sep-18	5.74	7.5
98	R-12	MR-433	Salimar	OPC	Chisang Khola	16-Aug-18	23-Aug-18	13-Sep-18	6.00	7.5
99	T3L39	MR-434	Salimar	OPC	Chisang Khola	16-Aug-18	23-Aug-18	13-Sep-18	5.87	7.5
100	T3L23	MR-435	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	6.14	7.5
101	T3L39	MR-436	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	5.74	7.5
102	R-12	MR-437	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	6.27	7.5
103	R-2	MR-438	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	6.00	7.5
104	R-2 (Branch Road)	MR-439	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	6.40	7.5
105	R-74	MR-440	Salimar	OPC	Chisang Khola	18-Aug-18	25-Aug-18	15-Sep-18	6.80	7.5
106	R-12	MR-441	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	5.87	7.5
Contractor							Consultant			
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, KATHIMANDU, NEPAL.			
 Checked By Engineer							 Verified By Qty Engineer/CSE			
 Submitted By Contract Manager							 Approved By Team Leader			



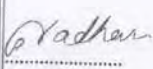

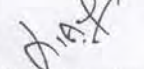
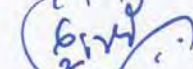


## REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

## Summary Sheet of Mortar Test Report

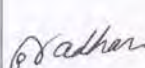


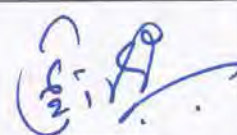
							Month		August		
							Year		2018		
							Description of Sample		Brick Wall		
S.N.	Location	Lab Ref.no.	Type of Cement	Brand of Cement	Source of Sand	Date of Casting	Date of Testing		Strength, N/mm2		Type of Grade
							7 Days	28 Days	7 Days	28 Days	
107	R-12	MR-442	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	5.87		7.5
108	R-74	MR-443	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	6.27		7.5
109	R-2 (Branch Road)	MR-444	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	6.40		7.5
110	R-7	MR-445	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	5.74		7.5
111	N-4	MR-446	Salimar	OPC	Chisang Khola	19-Aug-18	26-Aug-18	16-Sep-18	6.40		7.5
112	T3L23	MR-447	Salimar	OPC	Chisang Khola	20-Aug-18	27-Aug-18	17-Sep-18	6.67		7.5
113	T3L21	MR-448	Salimar	OPC	Chisang Khola	20-Aug-18	27-Aug-18	17-Sep-18	6.54		7.5
114	T3L39	MR-449	Salimar	OPC	Chisang Khola	20-Aug-18	27-Aug-18	17-Sep-18	6.67		7.5
115	R-12	MR-450	Salimar	OPC	Chisang Khola	20-Aug-18	27-Aug-18	17-Sep-18	5.87		7.5
116	R-2	MR-451	Salimar	OPC	Chisang Khola	20-Aug-18	27-Aug-18	17-Sep-18	6.27		7.5
117	R-2 (Branch Road)	MR-452	Salimar	OPC	Chisang Khola	20-Aug-18	27-Aug-18	17-Sep-18	5.87		7.5
118	R-74	MR-453	Salimar	OPC	Chisang Khola	20-Aug-18	27-Aug-18	17-Sep-18	6.67		7.5
119	T3L26E	MR-454	Salimar	OPC	Chisang Khola	20-Aug-18	27-Aug-18	17-Sep-18	5.87		7.5
120	T3L23	MR-455	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	6.14		7.5
121	T3L21	MR-456	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	6.94		7.5
122	R-12	MR-457	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	5.74		7.5
123	R-7	MR-458	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	6.67		7.5
124	R-2 (Branch Road)	MR-459	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	6.14		7.5
125	R-12	MR-460	Salimar	OPC	Chisang Khola	21-Aug-18	28-Aug-18	18-Sep-18	5.87		7.5
126	R-7	MR-461	Salimar	OPC	Chisang Khola	22-Aug-18	29-Aug-18	19-Sep-18	6.54		7.5
127	R-7	MR-462	Salimar	OPC	Chisang Khola	22-Aug-18	29-Aug-18	19-Sep-18	6.94		7.5
128	T2L18A	MR-463	Salimar	OPC	Chisang Khola	22-Aug-18	29-Aug-18	19-Sep-18	5.74		7.5
129	T2L18B	MR-464	Salimar	OPC	Chisang Khola	22-Aug-18	29-Aug-18	19-Sep-18	5.60		7.5
130	R-12	MR-465	Salimar	OPC	Chisang Khola	22-Aug-18	29-Aug-18	19-Sep-18	5.74		7.5
131	R-87	MR-466	Salimar	OPC	Chisang Khola	22-Aug-18	29-Aug-18	19-Sep-18	6.14		7.5
132	R-84	MR-467	Salimar	OPC	Chisang Khola	23-Aug-18	30-Aug-18	20-Sep-18	5.87		7.5
133	R-85	MR-468	Salimar	OPC	Chisang Khola	23-Aug-18	30-Aug-18	20-Sep-18	6.14		7.5
134	R-7	MR-469	Salimar	OPC	Chisang Khola	23-Aug-18	30-Aug-18	20-Sep-18	5.74		7.5
135	R-12	MR-470	Salimar	OPC	Chisang Khola	23-Aug-18	30-Aug-18	20-Sep-18	6.14		7.5
136	R-87	MR-471	Salimar	OPC	Chisang Khola	23-Aug-18	30-Aug-18	20-Sep-18	5.87		7.5
137	R-84	MR-472	Salimar	OPC	Chisang Khola	23-Aug-18	30-Aug-18	20-Sep-18	6.40		7.5
138	T3L23	MR-473	Salimar	OPC	Chisang Khola	24-Aug-18	31-Aug-18	21-Sep-18	6.27		7.5
139	R-12	MR-474	Salimar	OPC	Chisang Khola	24-Aug-18	31-Aug-18	21-Sep-18	5.74		7.5
140	R-87	MR-475	Salimar	OPC	Chisang Khola	24-Aug-18	31-Aug-18	21-Sep-18	6.67		7.5
141	R-84	MR-476	Salimar	OPC	Chisang Khola	24-Aug-18	31-Aug-18	21-Sep-18	6.00		7.5
142	R-85	MR-477	Salimar	OPC	Chisang Khola	24-Aug-18	31-Aug-18	21-Sep-18	5.00		7.5
Contractor						Consultant					
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						Submitted By Contract Manager					
											
						Verified By Qty Engineer/CSE					
											
						Approved By Team Leader					





### Summary Sheet of Mortar Test Report



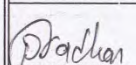
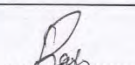
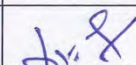
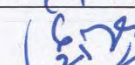
REGIONAL URBAN DEVELOPMENT PROJECT								Month	August
Biratnagar Metropolitan City								Year	2018
Contract No:- RUDP/ICB/BRT-02								Type of Material	Brick
Summary Sheet Of Monthly Test Report									
S.N.	Lab Ref.No.	Testing Date	Location of Sample	Source of Brick	Name Of Brick	Water Absorption of Brick(%)	Strength of Brick(N/mm <sup>2</sup> )	Remarks	
1	41	5-Aug-18	R-21	Dadarbairya	ACC	14.92	12.99		
2	42	5-Aug-18	T3L39	Dadarbairya	ACC	15.24	14.37		
3	43	5-Aug-18	T3L39	Dadarbairya	ACC	14.49	12.89		
4	44	5-Aug-18	T3L21	Dadarbairya	ACC	11.79	12.42		
5	45	6-Aug-18	Rani Site	Dadarbairya	ACC	11.65	13.06		
6	46	7-Aug-18	Rani Site	Dadarbairya	ACC	11.69	14.16		
7	47	7-Aug-18	R-21	Dadarbairya	ACC	13.46	12.25		
8	48	8-Aug-18	N-2	Dadarbairya	ACC	14.70	13.17		
9	49	8-Aug-18	T2L26E	Dadarbairya	ACC	14.94	12.62		
10	50	9-Aug-18	Rani Site	Dadarbairya	ACC	13.75	13.79		
11	51	9-Aug-18	R-74	Dadarbairya	ACC	13.84	14.63		
12	52	9-Aug-18	N-2	Dadarbairya	ACC	12.56	13.43		
13	53	9-Aug-18	T3L23	Dadarbairya	ACC	12.68	12.93		
14	54	10-Aug-18	T3L39	Dadarbairya	ACC	13.85	13.33		
15	55	11-Aug-18	R-21	Dadarbairya	ACC	11.99	13.86		
16	56	11-Aug-18	T3L21	Dadarbairya	ACC	12.87	14.45		
17	57	11-Aug-18	T3L23	Dadarbairya	ACC	12.33	15.29		
18	58	11-Aug-18	T3L23	Dadarbairya	ACC	12.68	14.37		
19	59	12-Aug-18	N-4	Dadarbairya	ACC	12.82	12.74		
20	60	13-Aug-18	R-21	Dadarbairya	ACC	12.35	14.32		
21	61	13-Aug-18	N-2	Dadarbairya	ACC	13.84	15.16		
22	62	13-Aug-18	T2L26E	Dadarbairya	ACC	12.20	13.90		
23	63	14-Aug-18	Rani Site	Dadarbairya	ACC	13.87	12.61		
24	64	15-Aug-18	R-74	Dadarbairya	ACC	13.25	13.29		
25	65	16-Aug-18	T3L39	Dadarbairya	ACC	13.75	14.00		
26	66	16-Aug-18	T3L23	Dadarbairya	ACC	12.82	13.49		
27	67	16-Aug-18	R-12	Dadarbairya	ACC	11.97	12.93		
28	68	16-Aug-18	N-4	Dadarbairya	ACC	13.51	14.39		
29	69	16-Aug-18	N-2	Dadarbairya	ACC	11.87	15.60		
30	70	17-Aug-18	R-74	Dadarbairya	ACC	12.8	12.37		
Sub-Clause No.2502, Standard Specification Road And Bridge 2073						<20%	>8 to 10 N/mm <sup>2</sup>		
Comments:-									
Contractor					Consultant				
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					 Submitted By Contract Manager				
 Verified By QTY Engineer/CSE					 Approved By Team Leader				



**Biratnagar Metropolitan City**  
**Contract No:- RUDP/ICB/BRT-02**  
**Summary Sheet Of Monthly Test Report**





REGIONAL URBAN DEVELOPMENT PROJECT														
Biratnagar Metropolitan City														
Contract No:- RUDP/ICB/BRT-02														
Summary Sheet of Monthly Test Report of Concrete Sand														
											Month	August		
											Year	2018		
											Type of Material	Concrete Sand		
S.n.	Lab.Ref no.	Date of Test	Location of Sample	Source of Sample	Sieve Size in mm / % Passing by weight							Clay Content%	Remarks	
					10	4.75	2.36	1.18	0.600	0.300	0.150			
1	RUDP-CS-133	1-Aug-18	DDC-Yard	Chisang Khola	100.00	93.46	71.22	31.71	23.60	9.84	4.50	1.87		
2	RUDP-CS-134	2-Aug-18	Rani Sie	Chisang Khola	100.00	95.46	66.80	48.85	30.39	13.82	3.67	1.29		
3	RUDP-CS-135	3-Aug-18	Madhumara-Yard	Chisang Khola	100.00	94.47	80.13	31.94	20.82	10.81	4.33	1.57		
4	RUDP-CS-136	3-Aug-18	R-11	Chisang Khola	100.00	91.88	69.74	33.83	22.14	14.03	5.19	1.90		
5	RUDP-CS-137	4-Aug-18	T3L39	Chisang Khola	100.00	94.84	64.03	32.57	20.95	10.04	3.87	1.80		
6	RUDP-CS-138	5-Aug-18	R-6	Chisang Khola	100.00	93.11	69.66	39.33	28.35	15.66	4.74	1.89		
7	RUDP-CS-139	6-Aug-18	R-2(Branch Road)	Chisang Khola	100.00	92.06	73.37	33.45	23.68	16.51	5.62	1.42		
8	RUDP-CS-140	6-Aug-18	N-2	Chisang Khola	100.00	95.47	81.28	35.81	26.84	15.47	4.89	1.28		
9	RUDP-CS-141	9-Aug-18	N-4	Chisang Khola	100.00	92.61	65.44	34.90	17.69	12.71	4.59	2.07		
10	RUDP-CS-142	11-Aug-18	R-12	Chisang Khola	100.00	93.76	67.94	37.05	29.57	17.46	3.15	1.61		
11	RUDP-CS-143	12-Aug-18	R-2	Chisang Khola	100.00	93.28	72.33	35.57	27.43	14.07	6.01	1.91		
12	RUDP-CS-144	12-Aug-18	R-74	Chisang Khola	100.00	93.28	72.33	35.57	27.43	14.07	6.01	1.35		
13	RUDP-CS-145	13-Aug-18	R-36	Chisang Khola	100.00	92.65	80.56	46.52	22.34	9.48	4.45	1.49		
14	RUDP-CS-146	14-Aug-18	T3L21	Chisang Khola	100.00	91.86	76.52	82.64	27.48	17.34	8.01	1.54		
15	RUDP-CS-147	15-Aug-18	T3L18-A	Chisang Khola	100.00	95.08	87.54	67.31	26.38	13.38	3.38	1.59		
16	RUDP-CS-148	16-Aug-18	T3L23	Chisang Khola	100.00	94.23	85.17	64.90	23.29	9.93	2.89	1.95		
Spec. Limit :					100	90~100	60~95	30~70	15~34	5~20	0~10	<3%		
Contractor					Consultant									
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					 Submitted By Contract Manager					 Verified By Qty Engineer/CSE				 Approved By Team Leader



## REGIONAL URBAN DEVELOPMENT PROJECT

## Biratnagar Metropolitan City

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

### Summary Sheet of Monthly Test Report of Concrete Sand

[illegible]



## REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

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

### SUMMARY SHEET OF CEMENT TEST

										Month		August		
										Year		2018		
S.N.	Lab Ref.no	Type of cement	Tetsing Date	Consistency & Setting Time			Soundness (mm)	Fineness (%)	Date of Casting	Date of Testing		Strength N/mm <sup>2</sup>		Remarks
				Normal Cons. (%)	Initial (Min)	Final (min)				7 Days	28 Days	7 days	28 Days	
1	10	Salimar OPC							8-Jul-18	15-Jul-18	5-Aug-18		47.02	
2	11	Salimar OPC							8-Jul-18	15-Jul-18	5-Aug-18		48.05	
3	12	Salimar OPC							12-Jul-18	19-Jul-18	9-Aug-18		45.79	
4	13	Salimar OPC	3-Aug-18	28.25	94	209	2.25	2.37	4-Aug-18	11-Aug-18	1-Sep-18	35.02		
5	14	Salimar OPC	7-Aug-18	29.25	104	210	2.21	3.04	8-Aug-18	15-Aug-18	5-Sep-18	35.52		
6	15	Salimar OPC	15-Aug-18	30.10	108	225	1.51	2.89	16-Aug-18	23-Aug-18	13-Sep-18	36.93		
7	16	Salimar OPC	12-Aug-18	29.75	105	221	2.36	2.40	19-Aug-18	26-Aug-18	16-Sep-18	36.43		
8	17	Salimar OPC	20-Aug-18	28.50	113	229	2.36	2.97	21-Aug-18	21-Aug-18	18-Sep-18	37.43		
9	18	Salimar OPC	21-Aug-18	31.50	110	235	1.94	2.35	22-Aug-18	22-Aug-18	19-Sep-18	38.84		
10	19	Salimar OPC	22-Aug-18	28.75	104	210	2.04	3.49	20-Aug-18	23-Aug-18	17-Sep-18	35.22		
11	20	Salimar OPC	23-Aug-18	30.25	99	203	2.16	3.28	24-Aug-18	31-Aug-18	21-Sep-18	34.62		
Sp.Limit:				26-35	Min-45	Max-600	<10	<10				>33	>43	
Comments:-														
Contractor							Consultant							
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							
<div>Checked By Engineer</div>							<div>Verified By QTY Engineer/CSE</div>							
<div>Submitted By Contract Manager</div>							<div>Approved By Team Leader</div>							

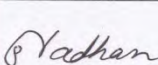
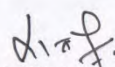

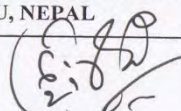


## REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Monthly Test Report of 20mm Agg.

									Month	August		
									Year	2018		
									Type of Material	20 mm Agg		
S.n.	Lab.Ref no.	Date of Testing	Location of Sample	Source of Sample	Sieve Size in mm / % Passing by				L.A.A.%	Fl and EI %	A.I.V.%	Remarks
					40	20	10	4.75				
1	RUDP-CA-133	1-Aug-18	Madhumara-Yard	Chisang Khola	100.00	97.07	40.06	3.83	28.76	19.20/17.53	20.36	
2	RUDP-CA-134	2-Aug-18	DDC-Yard	Chisang Khola	100.00	97.63	30.04	2.92	29.56	21.20/17.72	19.89	
3	RUDP-CA-135	4-Aug-18	RaniSite	Chisang Khola	100.00	97.11	35.81	4.57	27.78	19.98/18.29	21.50	
4	RUDP-CA-136	5-Aug-18	R-11	Chisang Khola	100.00	96.39	35.59	4.03	25.98	20.14/17.02	21.84	
5	RUDP-CA-137	6-Aug-18	T3L39	Chisang Khola	100.00	97.66	39.12	1.93	30.20	22.60/19.83	19.56	
6	RUDP-CA-138	8-Aug-18	R-6	Chisang Khola	100.00	97.01	34.67	3.54	32.22	21.39/19.51	19.36	
7	RUDP-CA-139	8-Aug-18	R-2(Branch Road)	Chisang Khola	100.00	96.98	39.91	4.08	27.50	21.46/20.23	19.31	
8	RUDP-CA-140	10-Aug-18	N-2	Chisang Khola	100.00	96.14	35.50	2.01	29.96	20.41/17.94	19.03	
9	RUDP-CA-141	10-Aug-18	N-4	Chisang Khola	100.00	97.15	38.68	2.69	30.90	20.44/17.59	19.38	
10	RUDP-CA-142	11-Aug-18	R-12	Chisang Khola	100.00	96.98	33.95	2.13	32.04	20.14/19.64	20.66	
11	RUDP-CA-143	12-Aug-18	R-2	Chisang Khola	100.00	98.16	37.95	2.54	29.92	20.58/19.19	20.09	
12	RUDP-CA-144	13-Aug-18	R-74	Chisang Khola	100.00	98.56	41.27	4.56	30.48	22.07/18.40	20.38	
13	RUDP-CA-145	13-Aug-18	R-36	Chisang Khola	100.00	98.31	43.41	2.10	26.96	20.54/18.84	21.40	
14	RUDP-CA-146	14-Aug-18	T3L21	Chisang Khola	100.00	97.88	33.87	3.64	27.96	21.08/18.31	19.93	
15	RUDP-CA-147	15-Aug-18	T2L18-A	Chisang Khola	100.00	98.58	32.94	2.64	26.90	21.72/19.89	20.46	
16	RUDP-CA-148	17-Aug-18	T3L23	Chisang Khola	100.00	96.96	31.54	1.51	30.96	23.14/17.63	21.58	
17	RUDP-CA-149	18-Aug-18	T2L26-E	Chisang Khola	100.00	98.34	31.84	3.30	29.72	21.25/18.85	19.79	
18	RUDP-CA-150	20-Aug-18	T3L18-B	Chisang Khola	100.00	96.87	29.85	4.08	30.38	22.03/18.54	20.62	
Spec. Limit :					100	95~100	25~55	0~10	<35	< 25	< 25	
Contractor									Consultant			
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									 Verified By Qty Engineer/CSE			
 Submitted By Contract Manager									 Approved By Team Leader			



## REGIONAL URBAN DEVELOPMENT PROJECT

### Biratnagar Metropolitan City

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

### Summary Sheet of Monthly Test Report of 20mm Agg.

[illegible]

ANNEX-4: SOCIAL SAFEGUARD MONITORING  
/ENVIRONMENTAL MONITORING FORMATS  
**Attached**





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	Block age 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	01	
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	



*Chisendra*

## Regional Urban Development Project(RUDP)

## Social Safeguard Monitoring

## Inventory of Social Facilities

## 1.General information

Subproject: -RUDP/ICB/BRT/2

Month/Year: - Aug 2018

Name of Contractor: -ZHONGGHENG Construction

Group/International Engineering Co pvt Beijing China.

Contract Package: RUDP/ICB/BRT/2

## 2.Total numbers of contractor workers involved in road construction(write down the number)

Type of Workers		Camp-1	Camp-2	Camp-3	Camp-4	Camp-5	Camp-6	Camp-7	Camp-8	Camp-9	Camp-10	Remarks
Local	Male	68	35	25	18	19	18	17	22	19	9	
	Female	0	2	5	0	0	2	4	0	0	0	
Non-Local	Male	5	16	23	23	18	21	13	8	19	16	
	Female	1	2	3	5	0	3	1	0	0	0	
Child Labour	Male	0	0	0	0	0	0	0	0	0	0	
	Female	0	0	0	0	0	0	0	0	0	0	

## 3. Source and adequacy of drinking water facility in the labour camp(use code)

Sources	camp-1	Camp-2	Camp-3	Camp-4	Camp-5	Camp-6	Camp-7	Camp-8	Camp-9	Camp-10	Remarks
a. Piped water	2	2	2	-	-	2	2	2	2		
b.Well/Spring	2	2	2	2	2	-	-	-	-	2	
c.Tanker											
d. ....											
Code:											
Insufficient-1	Sufficient-2		Plenty-3								

## 4. Type and number of toilets in the labour camp (write down the number)

Type	Camp-1	Camp-2	Camp-3	Camp-4	Camp-5	Camp-6	Camp-7	Camp-8	Camp-9	Camp-10	Remarks
a.Pit Latrine	-	-	-	-	1	-	-	-	1	-	
b.Pan	4	2	2	1		1	1	1	-	1	
c.Open											
d. ....											

## 5. Energy used in labour camp (tick mark)

Sources of Energy	Camp-1	Camp-2	Camp-3	Camp-4	Camp-5	Camp-6	Camp-7	Camp-8	Camp-9	Camp-10	Remarks
a. Firewood											
b.Kerosene											
c. L.P Gas	√	√	√	√	√	√	√	√	√	√	





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

Subproject Road : -RUDP/ICB/BRT/2

Month/Year: Aug 2018

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: August 2018

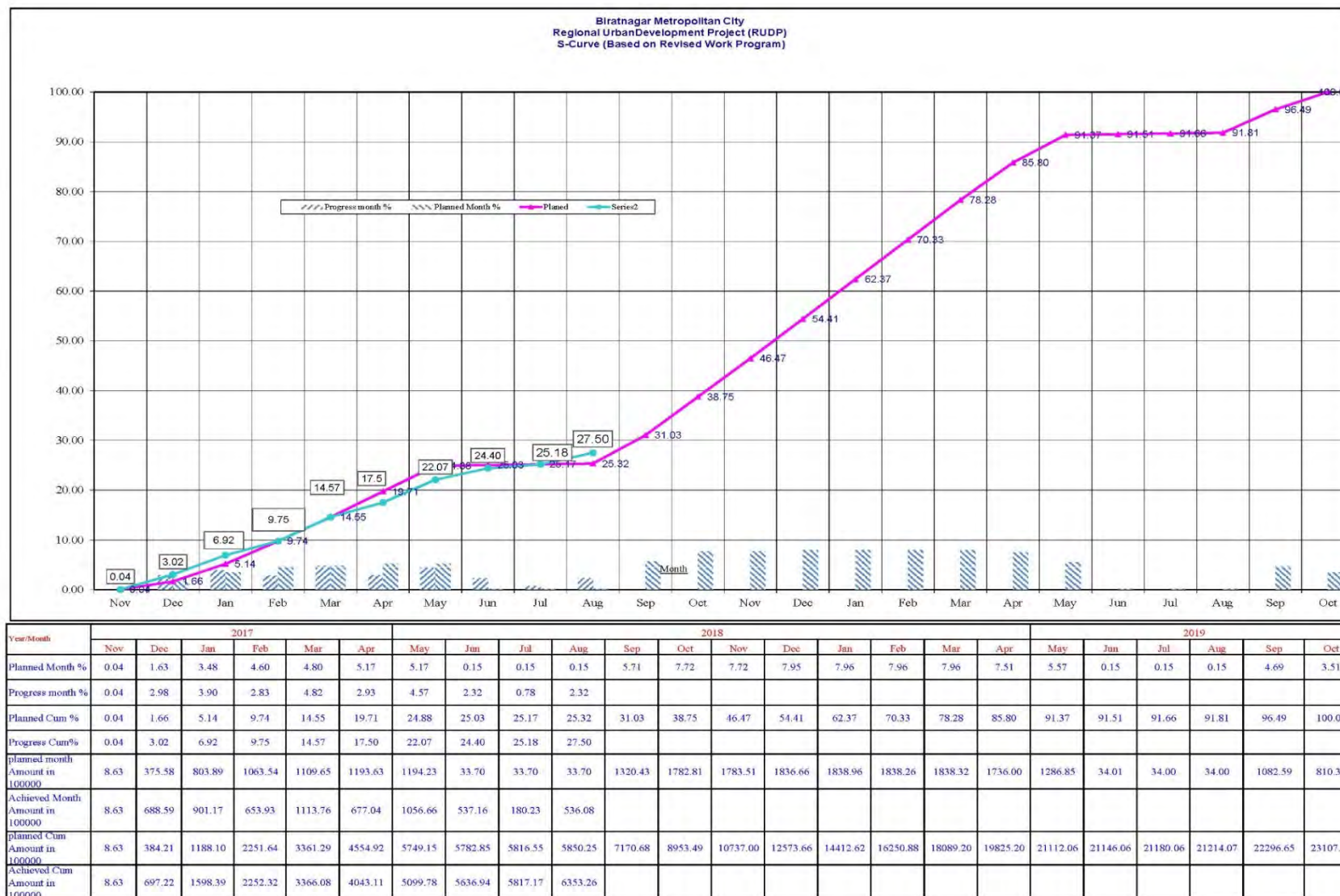
**Checklist**

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	DDC, Kanchanbari, 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	

*[Signature]*

ANNEX-5: S-CURVE  
**Attached**







## MASTER PLAN OF RUDP PROJECT



