

In association with

Brisbane City Enterprise Pty Ltd, Australia
AQUA Consultant and Associates Ltd, Bangladesh
Building Design Authority, Nepal
CEMAT Consultants, Nepal



Monthly Progress Report (April, 2017)

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar, Nepal

05 May, 2017



Biratnagar Sub - Metropolitan City, Nepal

Project Name:	Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP)
Project Number:	56064023
Report for:	Biratnagar Sub Metropolitan City, Nepal

PREPARATION, REVIEW and AUTHORISATION

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1. SALIENT FEATURE of Contract Package: STIUEIP/W/BRT/ICB-01

General Features	
Name of Project	Secondary Towns Integrated Urban Environmental Improvement Project(STIUEIP)
Executing Agency	Government of Nepal, Ministry of Urban Development Department of Urban Development and Building Construction (DUDBC)
Implementing Agency	Biratnagar Sub-Metropolitan City, Biratnagar
Funded By	Asian Development Bank & Government of Nepal
Package	Sewerage and Drainage Network, Wastewater Treatment Plant and Road and Lanes Improvement Sub Project
Contract No.	STIUEIP/W/BRT/ICB-01
Location	Biratnagar Sub-Metropolitan City, Biratnagar
Consultant	SMEC in association with Brisbane/AQUA/BDA/CEMAT
Contractor	CTCE-KALIKA Joint Venture
Date of Commencement	08 December, 2013
Original Completion Date	26 May, 2016
Revised date of Completion	09 March, 2017
Revised date of completion Proposed in EOT - 02	02 July, 2017
Revised Contract Amount including PS and VAT w.r.t VO-03	NRs. 2,956,290,542.71
Recommendation Amount up to IPC 24 (End of April 2017)	NRs. 2,207,320,168.26 (Including PS & VAT)
Physical Progress till April, 2017	77.15 (wrt to vo-03)
Financial Progress	74.66% (wrt to vo-03)

2 INTRODUCTION/BACKGROUND

a) SMEC International Pty (Australia) in association with Brisbane City Enterprise Pty Ltd (Australia), AQUA Consultant and Associates Ltd (Bangladesh), Building Design Authority (Nepal) and CEMAT Consultants (Nepal) have entered for a Contract of Consulting Services with Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Project Implementation Unit (PIU), Biratnagar Sub Metropolitan City on 7th December 2011. This monthly Progress Report of February, 2017 has been submitted to the PIU as per the Work Program proposed in the consultant's technical proposal as well as TOR of the consultant.

b) Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), 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 2650-NEP. As per PAM contribution from GoN is 3.99 million USD, Asian Development Bank (ADB) 18.86 million USD and Biratnagar Sub-Metropolitan City (BSMC) 1.99 million USD while contingency is 2.88 million USD for Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar. The cost sharing has been revised in April, 2013 as: Government of Nepal (GoN) is 5.960 Million USD, Asian Development Bank (ADB) 24.214 Million USD, TDF loan 4.098 Million USD and Biratnagar Sub-Metropolitan City (BSMC) 2.980 Million USD and in total 37.252 Million USD.

c) 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 proposed project Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP) is another step forward to promote healthy cities by creating healthier urban environments and was formulated under the PPTA 2010.

- Contract of consulting services signed on 07 December 2011.
- Design works commenced on 01 January 2012.
- Final design works submitted to the Client on March 2013
- Contract of construction works signed on 02 December 2013
- Construction works commenced on 08 December 2013
- The revised work programme with S-curve and Resource plan is submitted by the contractor along with EOT – 02 for approval (work progressing as per daily work programme).

3. SUB-PROJECT COMPONENTS

3.1 SEWER LINES

d) The prioritized sewer lines for Final Detailed Engineering Report of BSMC are as follows:

Table1: Proposed Sewer Lines in BSMC

S N.	Description	Unit	Quantity
1	Sewerage Pipe Supply and Installation	m	63,964.00
	Reinforced Concrete Pipe laying and jointing		16,612.00
	Line T1 (Secondary	m	3,788.00
	Line T2 (Trunk)	m	8,370.00
	Line T3 (Trunk)	m	4,136.00
	Line T4 (Secondary)	m	318.00
	HDPE laying and jointing	m	47,352.00
	Line T1 (Secondary	m	7,124.00
	Line T2 (Trunk)	m	19,410.00
	Line T3 (Trunk)	m	18,606.00
	Line T4 (Secondary)	m	22,12.00
2	Manhole (Brick / RCC)	no.	2,036.00
3	Sewer Inlet	no.	3,766.00
4	House Connection	no.	5,930.00
5	Reinstatement of Roads	km	66.06

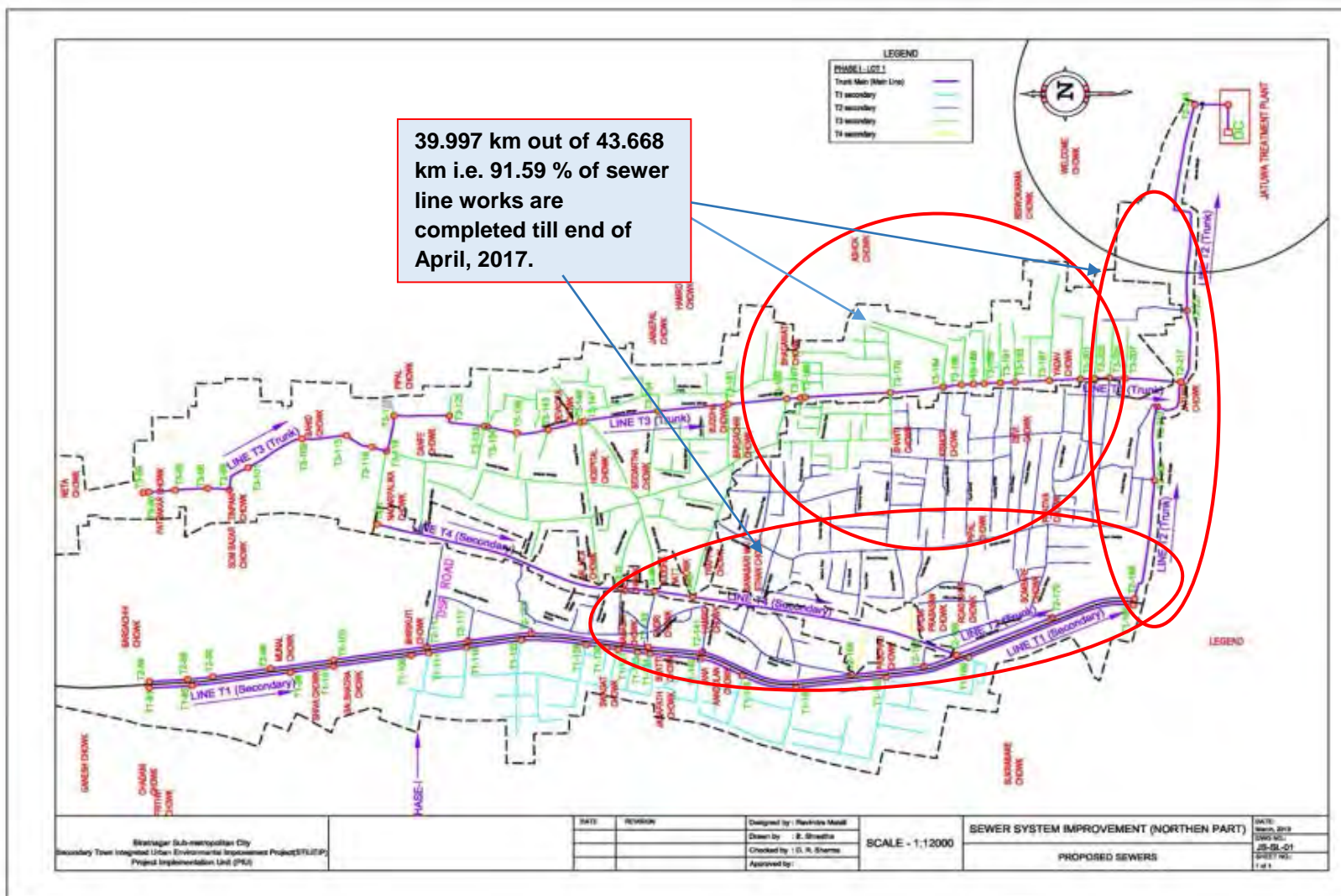


FIGURE. 1 PROPOSED SEWER LINES IN BSMC

3.2 STORM WATER DRAINS

e) Most of the storm drains (S13, S11, S9, S5, B1, B2, B3, CN2, CN3 and southern parts) have been provisioned as Phase I priority works. The major storm drain outlets as planned are 14 numbers and catchment areas and discharges are respectively 1, 324.2Ha and 73.21 cum/sec.

Table2: Proposed Storm Water Drains in BSMC

S.No.	Description	Unit	Quantity
A	Storm Drain for Northern Parts		28,491.00
I	Storm Drain Lines	m	28,491.00
II	Culvert	no	41.00
III	Outfall	no	15.00
IV	Rain Inlet	no	30.00
V	Manhole	no	30.00
VI	Canal Crossing	no	11.00
B	Storm Drain for Southern Part		
I	Brick Masonry Drain	m	8,483.00
II	Cleaning and Maintenance of Existing Drain	m	7,273.00
III	Culverts	no	38.00
C	Rehabilitation of Existing Drain		
I	Drain Cover	M	30,467.00
II	Cleaning and Maintenance of Existing Drain	M	33,601.00

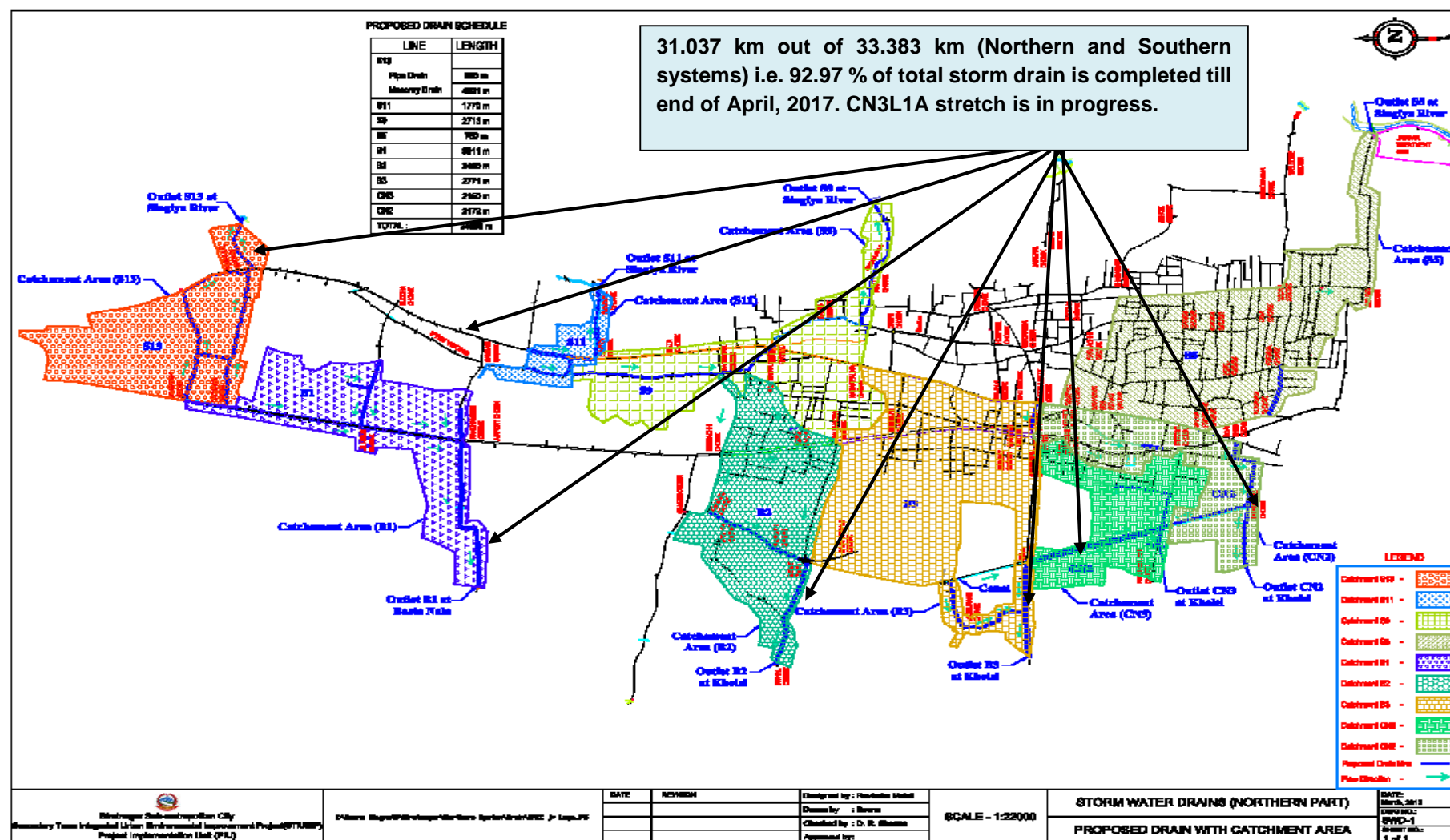


Figure 2: Proposed Storm Water Drains in BSMC (Northern Drainage System)

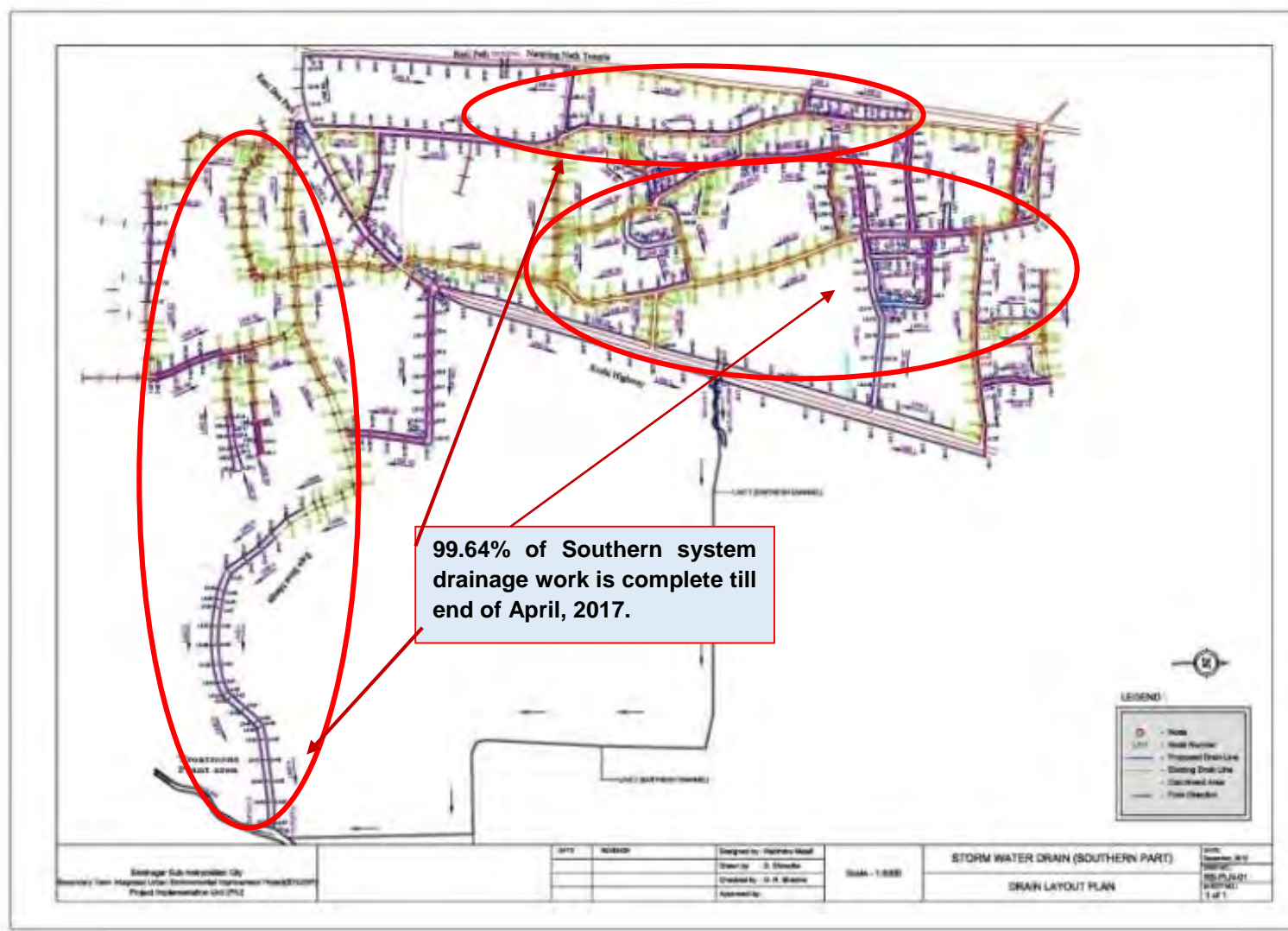


Figure 3: Proposed Storm Water Drains in BSMC (Southern Drainage System)

3.3 WASTE WATER TREATMENT PLANTS

f) The quantity of domestic waste water is calculated using water supply rate at 90 liters per person per day in the design year 2035, out of which 80% is converted into waste water. Maximum quantity of waste water is calculated taking peak factor of 1.99 to 2.5. Minimum quantity of sewage is taken as 30% of the average quantity. Commercial / Institutional / Industrial waste water quantity is calculated as 0.10 LPS/ha. While infiltration quantity is calculated as 0.14 LPS/ha in the design year 2035. The total quantity of commercial / institutional / industrial and infiltration waste water estimated as 237.79 LPS in the design year 2035 which is very large in comparison with domestic waste water quantity of 207.18 LPS. The maximum quantity (peak flow) of waste water in the design year 2035 for both Phase I and Phase II are as is estimated at 650.08 LPS. The maximum quantity of the waste water for Phase I are as only is estimated at 213.97 LPS. The capacity of the Phase I WWTP has been adopted as 214 LPS. The capacity of the Phase II WWTP will be thus 436 LPS. Features of WWTP at Jatuwa are as follows:

Table 3: Proposed Waste Water Components in BSMC

S.N.	Description	Unit	No
	Waste Water Treatment Plant Component		
1	By Pass Chamber	No	1
2	Distribution Chamber	No	1
3	Bar Screen Chamber	No	2
4	Sump well with Pumping Station	No	2
5	Collection Chamber1	No	1
6	Oil & Grease Chamber	No	2
7	Collection Chamber2	No	1
8	Grit Chamber	No	2
9	Collection Chamber3	No	1
10	Anaerobic Pond	No	3
11	Facultative Pond	No	3
12	Collection Chamber4	No	1
13	Outfall Structure	No	1
14	Sludge Drying Bed	No	10
15	Enclosure Chamber Shed	No	1
16	Guard House	No	1
17	Office Cum Lab Building	No	1
18	Workshop Building	No	1
19	Generator/Changing House	No	1
20	Entrance Gate	No	1
21	Boundary wall	m	1,340
22	Shallow Tube Well with water Tank	set	1
23	Landscaping and Plantation works	sqm	99,915
24	Site clearance, grubbing, surface dressing	sqm	99,915
25	Road and Drain Improvement	m	1,440

Table 3: Proposed Waste Water Components in BSMC, Cont.....

S.N.	Description	Unit	No
26	River training works	m	600
27	Electromechanical works	Set	1
28	Lab Equipment and installation	Set	1

60.20% of the WWTP works is completed till end of April, 2017

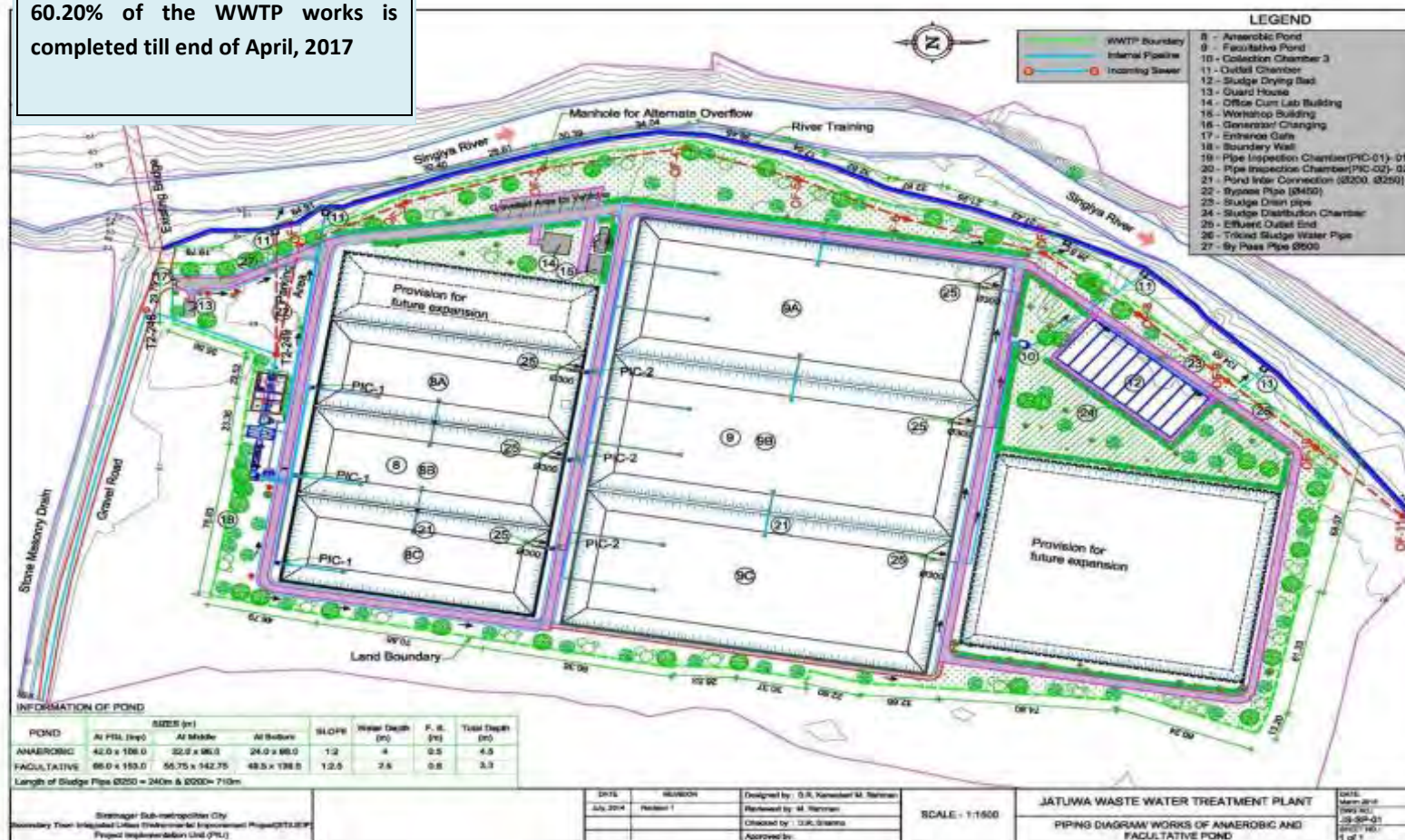


Figure 4: Proposed Waste Water Treatment Plant at Jatuwa in BSMC

3.4 ROADS AND LANES

g) 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 3.224 Km road improvement with Asphalt from Pushpalal Chowk to Pani Tanki Chowk is completed where as in other roads, 21.787 Km Sub-grade and Sub-base is completed till this month and hence the Project has considered on design based on reinstatement, rehabilitation and upgrading of existing roads and lanes.

Table 4: Proposed Roads in BSMC

Description of Item	Quantity
Main Road Improvements(Road from Pushpalal Chowk to Panitanki)	3.224 Km
Reinstatement and Road Improvements (under sewer line installation) and WWTP	41.358 Km

3.5 ENVIRONMENTAL ASPECT

h) The project is environmental improvement project and mainly constitutes works on sewerage and drainage improvement works in BSMC besides others. As per ADB guide lines on Environmental Assessment requirements, this project is classified as Environment Category B. According to Environmental Protection Guidelines, 2054BS, First Revised (2055 BS) schedule-3, IEE is required for Operations of Sewerage Schemes under Schedule1.h.2.e (pertaining to Rule3). The final report on IEE was submitted and MoUD had approved the IEE on May14, 2013.

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

j) DSC has prepared and submitted Environmental Progress Reports (Semi-Annual) October 2014 – March 2015 and Quarterly Updated Environmental Report, January – March on 27 May 2015. Recently, the DSC has received comments from PCO to revise semi-annual environmental report. The next Quarterly Updated Environmental Report for the months of April, May and June 2016 and semi –annual report has been submitted in July, 2016. The Quarterly Updated Environmental Report for the months of June 2016- December 2016 semi – annual report has been submitted in Jan 2017.

3.6 SOCIAL ASPECT

k) Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP) in Biratnagar has commenced from 2010 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 STIUEIP in Biratnagar Sub-Metropolitan City (BSMC). Besides this, community development and institutional strengthening components, the two other objective focused components of STIUEIP Biratnagar are running various social development programs and activities.

Social development component is one of the major components of STIUEIP Biratnagar that comprises of various social development programs and activities like community development program (CDP), awareness raising, skill development, health and sanitation. Social Development Specialist (SDS) in Design and Supervision Consultant (DSC) is deputed to assist the Project

Implementation Unit (PIU) in implementing effectively the social activities to achieve the project goal as envisaged by the project. Monitoring of ongoing social development activities and consultation meetings with community people are the general tasks to be accomplished as regular basis.

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.

Based on the poverty indicators, all details have been documented and shown in the social map. The program area for community development programs has been extended to most poverty stricken area scattered across several wards of the BSMC. The Community Development Program includes meetings, orientation, awareness activities, skill development trainings and health, hygiene and sanitation activities which are conducted and organized by the NGO (Fri PAD).

l) The Quarterly Report for the months of June 2016- December 2016 semi –annual report has been submitted in Jan 2017.

3.7 FINANCIAL PLAN

m) The Sub-project cost will be disbursed in three years starting from FY2013/14 to 2015/16. It has estimated that 20 percent of the Sub-project cost will be disbursed in first year. Similarly, in second year, 50 percent will be disbursed. Finally, remaining 30 percent of Sub-project cost will be disbursed in third year. Actual disbursement in the first fiscal year was 4.3 % (up to July 2014); 34.3% (up to July 2015 inclusive VO1) in second fiscal year was 56.72% so total was 63.78% (up to January, 2017). Hence the remaining disbursement 36.22 % will be done in third year.

3.8 DISBURSEMENT RECORDS IN CONSTRUCTION

Table 5: Disbursement Record in Construction to Date

S.No.	Description of Payment	Total Bill Amount with VAT & PS	Remark
1	IPC 01		
2	IPC 02	29,553,479.92	
3	IPC 03	50,406,775.75	
4	IPC 04	44,819,505.68	
5	IPC 05	23,380,168.96	
6	IPC 06	90,796,339.68	
7	IPC 07	80,854,600.52	
8	IPC-08	122,334,488.86	
9	IPC-09	116,092,187.14	
10	IPC-10	132,327,417.89	
11	IPC-11	169,853,829.07	
12	IPC-12	23,121,515.46	
13	IPC-13	85,563,926.44	
14	IPC-14	163,562,505.71	
15	IPC-15	139,008,112.96	

S.No.	Description of Payment	Total Bill Amount with VAT & PS	Remark
16	IPC- 16	137,640,413.95	
17	IPC-17	135,118,714.02	
18	IPC-18	39,288,088.98	
19	IPC-19	76,081,596.87	
20	IPC-20	74,522,638.96	
21	IPC-21	152,577,081.94	
22	IPC-22	140,477,295.40	
23	IPC-23	66,139,814.38	
24	IPC-24	113,799,669.72	Till the end of March,2017
	Grand Total	2,207,320,168.26	
	Total payment to date including PS & VAT and Excluding mobilization	2,207,320,168.26	

4. OBJECTIVES AND SCOPE OF WORKS

4.1. OBJECTIVES

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

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

o) 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

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

- A. Detailed Design and Procurement Assistance Phase
 1. Surveys verification of Feasibility Studies and GIS Base Maps
 2. Finalization of Design Criteria, Preparation of Manuals, Guidelines and Systems.
 3. Specific design requirements for the sub-projects
 - Improvement and development of drainage and sewerage systems
 - Improvement of urban roads and lanes
 4. Project Planning and Management Support to PIU
 5. Detailed Engineering Design
- B. Construction and Post Construction Management Phase
 1. Construction Management and Contract Administration

2. Environmental and Social Compliance Monitoring
 3. Implementation of Community Development Program, Community Mobilization and GESI Action Plan
 4. Capacity Building of the Municipality and Service Providers for Operational Sustainability
- C. Communications, Reporting and Deliverables (Inception Report, Monthly Progress Reports, Interim Report for each of the outputs, Annual Progress Report, Draft Final Report for each of the outputs and Final Report).

5. PROGRESS OF SUB-PROJECT COMPONENTS

5.1. STORM WATER DRAINS

q) The Contractor has resumed the works from mid December 2015 in difficult situation due to Madesh Strikes and partial fuel supply. But, again they have started the works of Storm drains at S9, CN3L1A, which are in progress.

The contractor has completed storm water drain about 31.037 km out of 33.383km, 92.97% till April, 2017.

5.2. SEWER LINES

r) The Contractor has resumed the sewer works from mid December 2015 in difficult situation due to Madesh Strikes and partial fuel supply. Sewer lines with HDPE pipes as well as RCC pipes have been resumed in this month.

The Contractor has completed sewer lines with HDPE and RCC pipes about 39.997 km out of 43.668 km which is 91.59%, till April, 2017.

The proposal of the precast concrete manholes, sewer inlets and house connection chambers had been submitted for review and approval. Approval in consultation with the Employer has been given to the Contractor to execute at site because the proposal comes out to be economical, time effective and environmental friendly and structurally strong enough to carry out the function of their respective items.

The precast concrete house connection chambers, sewer inlets and manholes were installed at sites and found to be effective and we were able to open traffic at the shortest possible time. Especially where the business center with crowds (in R5 and R65 Roads) were very efficient and effective. This has reduced disturbances to the local people and road users, dumping of construction materials, workers and working for long period. This is found to be environment friendly too. Hence, the adaptation of precast units for sewer lines found to be effective and efficient.

During the site visit of delegate at different time in the construction period from BSMC, PMSC, ADB, PCO, local political representatives, TLO Executive Director of TDF and the Secretary of Ministry of Urban Development have commended.

The payment for the respective item of works as appropriate is being paid under each IPCs for the cash flow and to account disbursement in ADB's disbursement book.

5.3. WASTE WATER TREATMENT PLANT

s) Office cum laboratory building, workshop building and generator / changing house at WWTP, Jatuwa are completed. The Contractor has been continued all activities except Bio-engineering of

WWTP.

Now the Contractor is carrying out Sump well, remaining boundary wall at WWTP from mid December 2016. Structure work in Sump well has been revised as per site condition and work started as per revised drawing. Rip Rap stone masonry works are in progress for Anaerobic & Facultative Pond. Pipe system, sand & gravel packing are in progress as sludge drying bed.

5.4. ROAD AND LANES IMPROVEMENT WORKS

t) The Contractor has completed the rehabilitation / repair of existing drain of about 6.6 km in R2 road. The Contractor has completed the shifting/ relocating electric poles up to Pani Tanki both sides.

The Contractor has been completed sub-grade preparation, sub-base, base course, prime and Tack coat and asphalt concrete in R2 road up to Pani Tanki Chowk. Recently contractor has completed 18.563 Km sub-base in other roads. Road works have been frequently disturbed due to the existing water supply network and house connection pipes. The Contractor has completed 100% of road side drain of R2 road up to Pani Tanki and along the sewer lines about 26.863 km out of 36.050 km, 74.51% till April, 2017.

5.5. CONSTRUCTION MATERIALS

u) The fabrication of steel moulds for precast units- manholes, sewer inlets and house connection chamber are continuing in this month also. Similarly, other item of works inside the Contractor's yard is also going on smoothly.

The Contractor has resumed to produce the precast items (manholes, sewer inlets, house connection chambers, kerb stones and drain cover slabs etc.) at the Contractor's Camp, Katahari from mid December 2015.

5.6. CONSTRUCTION MATERIAL TESTING LAB

v) Construction material testing laboratory has been set up at the Contractor's camp at Katahari. Cube Test, Brick Compressive Strength, Cement Test is conducted in the Laboratory. Besides these tests, Aggregate Crushing Value (ACV), Flakiness Index (FI), Los Angeles Abrasion (LAA), CBR tests are also conducted.

As regular, Three Edge Bearing Test for RCC pipes of different diameter has been conducted on 20 January 2016 at Itahari in presence of Consultant (TL, CSE) and PM/PIU. And results were found satisfactory.

Now, construction material testing lab is working in full swing for testing of sub grade material, sub base material, base material, Bituminous items, concrete, brick, sand and aggregates.

5.7. PHYSICAL PROGRESS TILL APRIL, 2017.

w) Total physical progress till April, 2017 is about 77.15% w.r.t vo-3. The Contractor has submitted revised work schedule with respect to variation order No-03, is in process to approval.

Table 6: Plan vs. Actual Progress till March, 2017

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar																
Plan Vs. Progress																
Month	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Cumulative Planned work Rev 01 (%)	17.098	18.514	26.588	36.398	46.281	56.947	67.003	76.728	86.593	94.037	95.75	95.99	96.16	96.3	96.45	96.59
Cumulative Planned work Rev 02 (%)				14.04	20.11	28.74	37.22	44.94	51.60	57.295	59.33	60.92	60.99	61.07	64.65	71.29
Cumulative Planned work Rev 03 (%)													41.847	45.447	47.767	58.037
Cumulative Actual Achievements (%)	5.81	5.98	9.29	10.77	12.57	17.57	21.82	25.25	27.85	34.317	34.317	34.317	34.317	34.317	34.317	34.94
Progress lagging to date wrt the revised work plan rev 03 (%)		(12.53)	(17.30)	(3.27)	(7.54)	(11.17)	(15.40)	(19.69)	(23.75)	(22.98)	(22.98)	(22.98)	(7.53)	(11.13)	(13.45)	(23.09)

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar

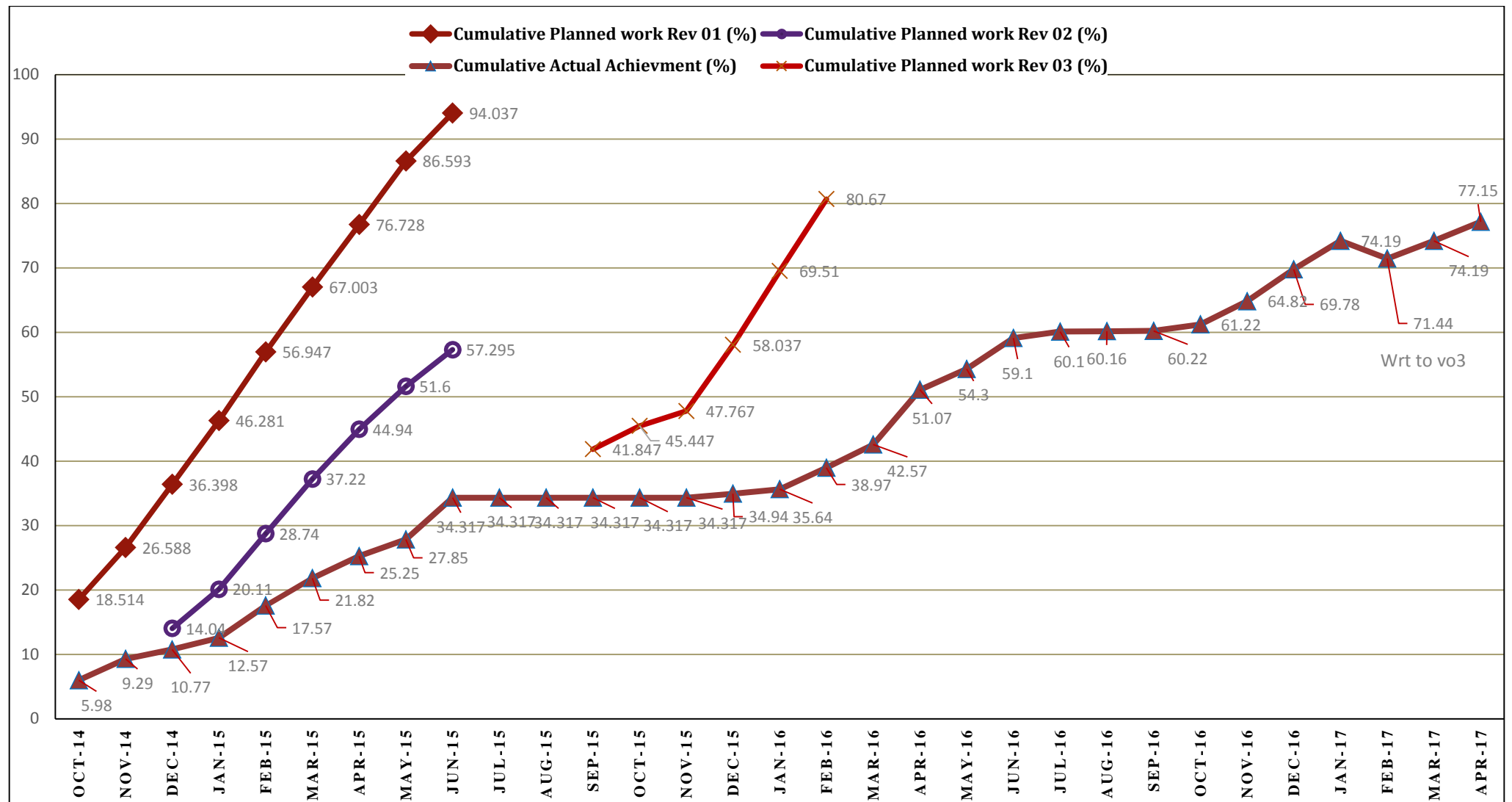
Plan Vs. Progress

Month		Jan-16	Feb-16	Mar-16	Apr-16	May-16	June-16	July-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17
Cumulative Planned work Rev 01 (%)		96.74	97.38	97.18												
Cumulative Planned work Rev 02 (%)		79.29	88.71	96.41												
Cumulative Planned work Rev 03 (%)		69.51	80.67	91.46	97.82	100.00										
Cumulative Actual Achievements (%)		35.64	38.97	42.57	51.07	54.30	59.10	60.10	60.16	60.22	61.22	64.82	69.78/63.12	74.19/67.53	71.44 (wrt Vo-03)	74.19
Progress lagging to date wrt the revised work plan rev 03 (%)		(33.87)	(41.70)	48.89	46.75	45.70										

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar

Plan Vs. Progress

Month		Apr-17	May-17	June-17	July-17											Remarks
Cumulative Planned work Rev 01 (%)																
Cumulative Planned work Rev 02 (%)																
Cumulative Planned work Rev 03 (%)																
Cumulative Actual Achievements (%)		77.15%														Work progresses are according to the recommendation on EOT-02 by DSC till 02 July, 2017
Progress lagging to date wrt the revised work plan rev 03 (%)																



6. SUMMARY OF ACTIVITIES CARRIED OUT UP TO PREVIOUS MONTHS

6.1. ORGANIZATION AND STAFFING

The Project has involvement of different organization and the staffing as shown below.

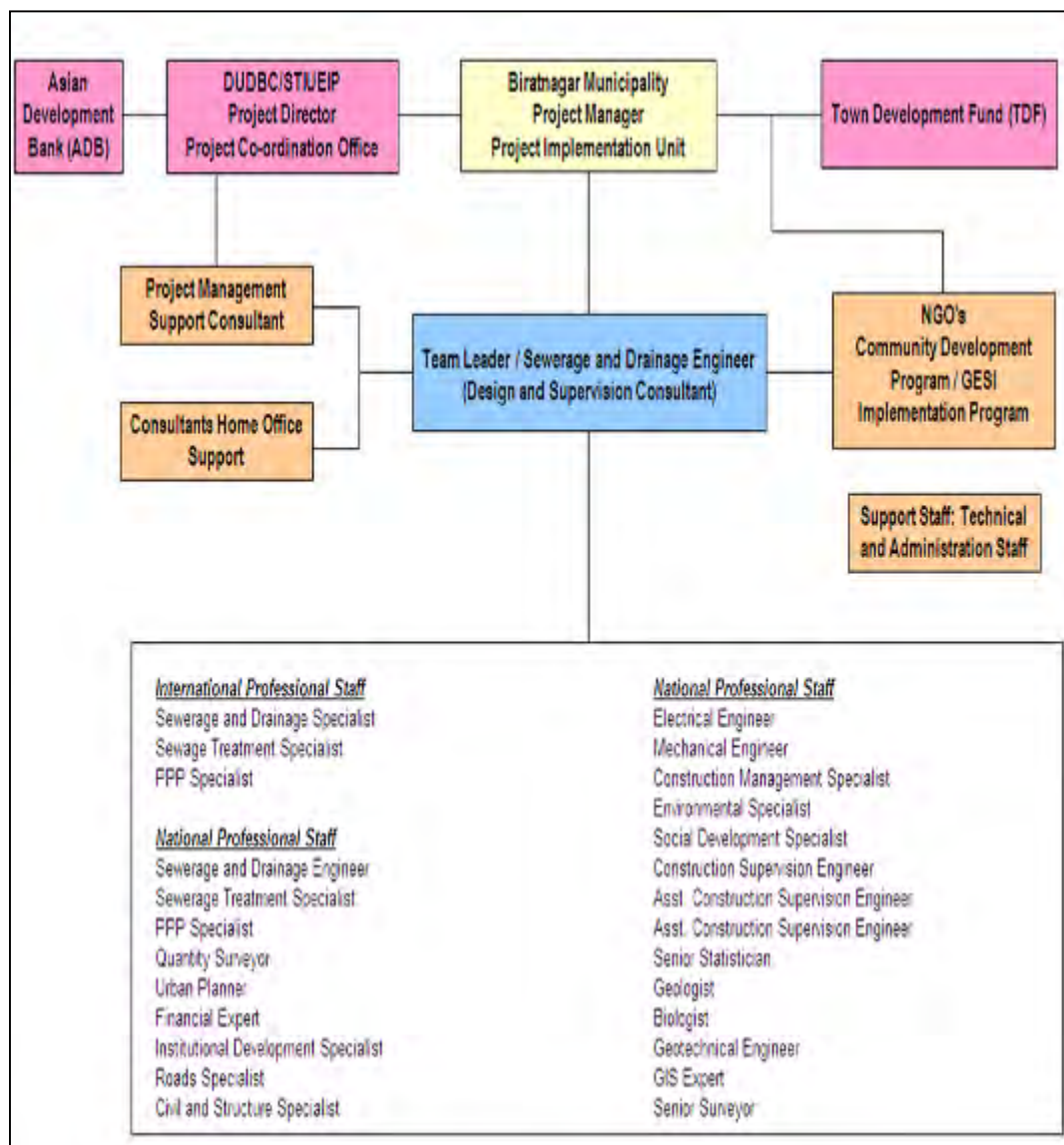


Figure 6: Organization and Staffing of STIUEIP, Biratnagar

6.2 Inception Report

- x) The Inception Report was prepared and submitted on 29 February, 2012.

6.3 CONCEPTUAL CATCHMENT PLAN AND DESIGN CRITERIA

- y) The Conceptual Catchment Plan and Design Criteria was prepared and presented in PCO on 30 March, 2012.

6.4 SURVEY

- z) The survey was completed in August, 2012

6.5 DESIGN

- aa) The design of sewer lines, storm drains, WWTPs and appurtenances and final detailed design and estimates were submitted in March 2013.

- bb) During construction B2, B3 and S5 alternate design was also submitted. Similarly, CN2 and CN3 were submitted as the community request to reduce the size. The size was reviewed with 1 year return period as per the suggestion made by PMSC during field visit. Minor modifications in drawings are being carried out for considering the site condition and progress.

6.6 PRE-CONSTRUCTION ACTIVITY

- cc) After successful completion of one stage two envelope bidding procedure the construction contract for STIUEIP/W/BRT/ICB-01 was signed on December 2, 2013 with M/S CTCE-Kalika JV, Baluwatar, Kathmandu.

6.7 DRAFT REPORT

- dd) The construction/contract timing schedule was needed to incorporate some additional time of about 4-5 months to account for decision re-making process, tender award procedures.

- ee) The total cost as per PPTA and earlier designs increased drastically and came to be NRs. 7, 274,465,206.69 and therefore needs curtailments and revisions had to be made as per suggestions by PIU in final report.

- ff) The overall works proposed in the PPTA and the area coverage with connection was thus needed to be phased out.

6.8 FINAL REPORT

- gg) The DSC submitted the Final Reports adopting cost reduction exercise by phasing out of the works. The estimated cost of the Project was reduced and kept as NRs. 3,278,140,000.00 with a lot of exercises in March 2013.

- hh) The sharing of cost by concerned institutions is as follows

Table7: Agency-wise Financial Contribution to BSMC

Contributors	Amount(US\$)	Amount (NRs.)	%
Government of Nepal (GoN)	5,960,256.00	524,502,513.00	16.0%
Asian Development Bank (ADB)	24,213,539.00	2,130,791,460.00	65.0%
Biratnagar Sub-Metropolitan City (BSMC)	2,980,128.00	262,251,257.00	8.0%
Town Development Fund (TDF)	4,097,676.00	360,595,478.00	11.0%

6.9 CONSULTANT'S ACTIVITIES IN CONSTRUCTION PHASE

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

Table 8: Consultant's Staff at Project Site, Biratnagar

S. No	Name	Position
1	Giresh Chand	Officiating Team Leader/CSE
2	Daniel Morgulis	Sewerage and drainage Expert
3	Ganesh Gautam	Construction Management Specialist
4	Bhupal Khadka	Road Specialist
5	Jaya Prakash Yadav	Asst. Construction Supervision Engineer-1
6	Dikendra Katwal	Asst. Construction Supervision Engineer-2
7	Amit Kumar Gupta	Asst. Construction Supervision Engineer-3
8	Rajesh Kumar Yadav	Junior Engineer-1
9	Deepak Majhee	Junior Engineer-2
10	Arun Kumar Yadav	Junior Engineer-3
11	Jay Prakash Yadav	Junior Engineer-4
12	Dipendra Shah	Junior Engineer-5
13	Santosh Kumar Yadav	Office Manager/Computer Operator
14	Ramji Ghimire	Driver-1
15	Suman Ghimire	Driver-2
16	Ramila Ghimire	Office Assistant

Note: Mr. Daniel Morgulis, Sewerage and drainage Expert has joined this office at Biratnagar on dated 11th of April, 2017.

jj) 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
- ii. Quality control, cost control and time control
- iii. Measurement and Certification of Interim Payment Certificates (IPC)
- iv. Modification and design of storm drainage and sewer lines, manholes etc. as per site condition and approve working drawings
- 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. Meet obligation of reporting requirement – Updated Environmental Progress Report, Updated Resettlement Progress Report, Monthly Progress Report, Semi-Annual Updated Resettlement Progress Report
- ix. Prepare Due Diligence Report of the Project
- x. Maintain correspondences with the Employer and the Contractor
- xi. Assist to PIU

6.10 KEY DATES

The consultant has noted the following key dates for the month of April, 2017

Table 9: Key dates of events /activities:

S. No	Date	Activities/Events	Remarks
1	08/04/2017 – 10/04/2017	Site visit and staff meeting at Biratnagar office by Khem Dallakoti, Managing Director, BDA	
2	20/04/2017	Site visit by EO of BSMCO with representatives to visit road side drain at Road Shesh Chowk	
3	28/04/2017	Site visit by Mr. Bal Sunder Malla, Managing Director, CEMAT	
4*		Frequent site visit by the client	

7 DETAILS OF ACTIVITIES CARRIED OUT IN THIS MONTH

7.1 PHYSICAL PROGRESS IN THIS MONTH

The Employer has discussed/agreed/decided to curtail (base and Asphalt) from the scope of the work except R2 stretch to meet other items which are essential for the projects. Those are as below:

some works were missed in original contract itself, some works were not foreseen in original contract, some works due to local demand etc.

Therefore, following are the physical progress with respect to variation order No-03 which has been already approved:

Table 10: Physical Progress in Storm Water Drains

Physical Progress till April 2017						
S.N.	Location	Proposed Length in (m)	Progress		Total to Date in (m)	Progress (%)
			Up to March 2017 in (m)	This Month in (m)		
1	B1	4003.55	3758.00	0.00	3758.00	
2	B2	3539.68	3539.68	0.00	3539.68	
3	B3	3505.02	3463.00	0.00	3463.00	
4	S5	1178.00	1178.00	0.00	1178.00	
5	S9	3558.22	2551.00	0.00	2551.00	
6	S11	1350.60	1350.60	0.00	1350.60	
7	S13	5000.21	5000.21	0.00	5000.21	
8	CN2	2197.30	2197.30	0.00	2197.30	
9	CN3	2563.77	2551.00	0.00	2551.00	
10	CN3LIA			30.00	30.00	
11	Rani	6486.70	6463.28	0.00	6463.28	
	Total	33383.05	31007.71	304.15	31037.71	92.97

Table 11: Physical Progress in Road Side Drains:

S.No	Location	Length (m)	Total Length (m)	Progress (length in meter)				Remarks
				Up to March 2017	This Month	Total Till Date	%	
1	R2	3420.00	6840.00	6405.00	160.00	6565.00	95.98	
2	R3	2233.00	2993.00	2922.00	3.00	2925.00	97.73	
3	R4	1246.00	2212.00	660.00	0.00	660.00	29.84	
4	R5	1068.00	2136.00	1980.00	13.00	1993.00	93.31	Satya Narayan Marga and College Road
5	R6	1280.00	2560.00	0.00	0.00	0.00	0.00	
6	R7	485.00	615.00	534.70	65.00	599.70	97.51	
7	R8	370.00	740.00	813.00	200.00	1013.00	136.89	Additional work is from Ch. 0+300 to Ch. 0+560
8	R9D	116.00	232.00	206.50	0.00	206.50	89.01	
9	R13	220.00	440.00	400.00	0.00	400.00	90.91	
10	R16	580.00	1160.00	1150.00	0.00	1150.00	99.14	
11	R21	2420.00	2420.00	1875.20	110.00	1985.20	82.03	
12	R22	359.00	718.00	676.00	0.00	676.00	94.15	
13	R24	390.00	780.00	768.00	0.00	768.00	98.46	
14	R25	594.00	1188.00	1131.10	0.00	1131.10	95.21	
15	R26	620.00	1240.00	1240.00	0.00	1240.00	100.00	
16	R27	977.00	1954.00	1224.05	22.00	1246.05	63.77	
17	R28	620.00	1240.00	775.00	0.00	775.00	62.50	
18	R29	620.00	1240.00	453.80	132.00	585.80	47.24	
19	R30	328.00	656.00	340.00	17.00	357.00	54.42	
20	R31	187.00	374.00	350.00	0.00	350.00	93.58	
21	R32	189.00	378.00	0.00	0.00	0.00	0.00	
22	R37	785.00	1570.00	665.00	155.00	820.00	52.23	Progress is as per site condition (Ch. 0+000 to Ch. 0+420) and rest of the quantity can deduct
23	R64	120.00	120.00	121.00	0.00	121.00	100.83	As per measurement and incorporated in IPC-20
24	R78	92.00	184.00	82.00	0.00	82.00	44.57	
25	T2L19 R	177.00	354.00	0.00	0.00	0.00	0.00	

S.No	Location	Length (m)	Total Length (m)	Progress (length in meter)				Remarks
				Up to March 2017	This Month	Total Till Date	%	
26	T2L19 P	103.00	206.00	0.00	0.00	0.00	0.00	
27	T2 19 U	81.00	162.00	0.00	0.00	0.00	0.00	
28	R107	157.00	314.00	236.00	52.00	288.00	91.72	
29	R108	96.00	192.00	192.00	0.00	192.00	100.00	
30	R109	90.00	360.00	355.00	0.00	355.00	98.61	
31	T3L26E	93.00	186.00	111.00	0.00	111.00	59.68	
32	T2L18O	143.00	286.00	268.00	0.00	268.00	93.71	
	Total	20259.00	36050.00	25934.35	929.00	26863.35	74.52	

Table 12: Physical Progress in Sewer Lines:

S.N.	Location	As per VO-3		Up to Previous Month		This month		Update work		% work	
		Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No
1	HDPE (T1)	3817.100	127	3625.5	122	176.000	3.00	3801.500	125		
2	HDPE (T2)	13595.400	485	12811.15	447	229.500	5.00	13040.650	452		
3	HDPE (T3)	6947.100	258	6571.1	238	0.000	0.00	6571.100	238		
4	HDPE (T4)	117.300	3	112	3	0.000	0.00	112.000	3		
5	Sub Total (HDPE)	24476.900	873	23119.750	810	405.500	8	23525.250	818	96.11	93.70
6	Hume pipe(T1)	5026.800	144	2799.25	84	1621.950	23.00	4421.200	107		
7	Hume pipe(T2)	9488.000	276	7820	209	704.400	13.00	8524.400	222		
8	Hume pipe(T3)	4493.300	136	2851.5	63	490.000	13.00	3341.500	76		
9	Hume pipe(T4)	183.500	5	185	5	0.000	0.00	185.000	5		
10	Sub Total (Hume pipe)	19191.600	561	13655.750	361	2816.350	49	16472.100	410	85.83	73.08
11	Total (HDPE + Hume pipe)	43668.500	1434	36775.500	1171	3221.850	57	39997.350	1228	91.59	85.63

Table 13: Physical Progress in Manhole, sewer inlet and House connection chamber

S.N.	Description	Proposed Quantity (no.)	Up to Previous Month	This Month	Total to Date	Progress (%)
1	Manhole	1434.00	1171.00	57.00	1228.00	85.63
2	Sewer inlet	2924.00	1511.00	100.00	1611.00	55.09
3	House connection chamber	4500.00	636.00	60.00	696.00	15.46

Table 14: Physical Progress in Roads and Lanes:

S.N.	Name of roads	Proposed length (m)	Previous Month	This Month (till the end of April)	Total Completed works	%age Completed
1	R2	3,050.00	-	-	3,224.00	105.70
2	R3	2,233.00	-	710.00	1,915.00	85.76
3	R4	2,163.00	-	350.00	958.00	44.29
4	R13	220.00	-	-	220.00	100.00
5	R14	485.00	-	-	525.00	108.25
6	R16 (east)	215.00	-	-	221.00	102.79
7	R16(west)	540.00	-	-	200.00	37.04
8	R17(east)	222.00	-	-	225.00	101.35
9	R17(west)	375.00	-	-	375.00	100.00
10	R18	464.00	-	-	464.00	100.00
11	R19	236.00	-	-	232.00	98.31
12	R22	358.00	-	-	376.00	105.03
13	R24	384.00	-	-	384.00	100.00
14	R25	599.00	-	186.00	594.00	99.17
15	R26(east)	244.00	-	-	244.00	100.00
16	R26(west)	617.00	-	306.00	506.00	82.01
17	R27	810.00	-	-	183.00	22.59
18	T3L32	235.00	-	-	231.00	98.30
19	T3L33 A	134.00	-	-	134.00	100.00
20	T3L33 B	170.00	-	-	164.00	96.47
21	R122	280.00	-	-	254.00	90.71
22	T3L30	205.00	-	-	205.00	100.00
23	T3L31 A	177.00	-	-	164.00	92.66

S.N.	Name of roads	Proposed length (m)	Previous Month	This Month (till the end of April)	Total Completed works	%age Completed
24	R20 (R6 to T2L19 O)	108.00	-	-	108.00	100.00
25	T2L19 O	71.00	-	-	71.00	100.00
26	R15	210.00	-	-	235.70	112.24
27	R16 to R15	100.00	-	-	126.20	126.20
28	R15 to R4	74.40	-	-	74.40	100.00
29	R8	427.00	228.50	-	228.50	53.51
30	R29	620.00	257.00	-	257.00	41.45
31	R23	143.00	140.00	-	140.00	97.90
32	R21	1,320.00	200.00	1,070.00	1,270.00	96.21
33	R28	635.00	340.00	-	340.00	53.54
34	T3L26 (R29 to R109)	128.00	126.00	-	126.00	98.44
35	T3L26A	65.00	65.00	-	65.00	100.00
36	T3L26B	96.00	85.00	-	85.00	88.54
37	T3L26C	191.00	179.40	-	179.40	93.93
38	T3L26E	216.00	250.00	-	250.00	115.74
39	R90	320.00	316.50	-	316.50	98.91
40	R8 (Madhumara)	600.00	-	330.00	330.00	55.00
41	R37	420.00	-	226.40	226.40	53.90
42	R5	600.00	-	604.50	604.50	100.75
43	R31 (R6toR10)	187.00	-	187.00	187.00	100.00
44	T2L19 S	100.00	-	66.00	66.00	66.00
45	T3L26D	64.00	-	64.00	64.00	100.00
46	R121	121.00	-	121.00	121.00	100.00
47	T3L25B	194.00	-	187.90	187.90	96.86

S.N.	Name of roads	Proposed length (m)	Previous Month	This Month (till the end of April)	Total Completed works	%age Completed
48	T3L25C	148.00	-	140.00	140.00	94.59
49	T3L27	66.00	-	158.00	158.00	239.39
50	T3L25A	133.00	-	123.00	123.00	92.48
51	R114	320.00	-	326.00	326.00	101.88
52	T1L16A	140.00	-	140.00	140.00	100.00
53	T1L16B	205.00	-	204.00	204.00	99.51
54	T1L16C	200.00	-	200.00	200.00	100.00
55	R10	220.00	-	220.00	220.00	100.00
56	R78 (R21to Highway)	92.00	-	93.00	93.00	101.09
57	R76	272.00	-	273.00	273.00	100.37
58	R9	123.00	-	117.00	117.00	95.12
59	T1L17 (west of R90)	82.00	-	82.00	82.00	100.00
60	T1L17,A	182.00	-	182.00	182.00	100.00
61	R75	136.00	-	120.00	120.00	88.24
62	R11	205.00	-	190.00	190.00	92.68
63	T1L15	224.00	-	240.00	240.00	107.14
64	R12	280.00	-	282.00	282.00	100.71
65	R86	200.00	-	180.00	180.00	90.00
66	WWTP Road outside	750.00	-	640.00	640.00	85.33
67	WWTP Road Inside	1,440.00	-	220.00	220.00	15.28
68	Remaining Proposed Length of roads	17,737.60	-	-	-	-
Grand Total =		44,582.00	2,187.40	8,538.80	21,787.50	48.87

Table 15: Physical Progress in Waste Water Treatment Plant (WWTP), Jatuwa

Physical Progress till April 2017							
S.N.	Description	Proposed Quantity as per VO-03	Progress		Total to Date	Progress in %age	Remarks
			Up to Previous month	This Month			
1	Anaerobic Pond	3 nos.	3.00	0.00	3.00	100.00	Rip Rap stone masonry work under progress
2	Facultative Pond	3 nos.	2.51	0.01	2.52	84.00	Rip Rap stone masonry work under progress
3	River Training Work	600 m	600.00	0.00	600.00	100.00	
4	Boundary Wall	1330 m	1283.00	0.00	1283.00	96.47	
5	Office cum Lab Building	1 no.	1.00	0.00	1.00	100.00	
6	Workshop Building	1 no.	1.00	0.00	1.00	100.00	
7	Generator / Changing House	1 no.	1.00	0.00	1.00	100.00	
8	Sump Well	1 no.	0.50	0.10	0.60	60.00	Up to 8.00 m height R.C.C work completed, remaining work under progress
9	Sludge Drying Bed	1no.	0.80	0.05	0.85	85.00	Brick Masonry work completed pipe, sand and gravel packing work under progress
10	Road Side Drain	2880 m	1346.10	60.00	1406.10	48.82	
11	Guard House	1 nos.	0.20	0.50	0.70	70.00	

Table 16: Physical Progress in Production of Precast Items at Katahari:

Physical Progress till April 2017						
S.N.	Description	Unit	Progress		Total to Date (nos.)	Remarks
			Up to March 2017 (nos.)	This Month (nos.)		
1	Precast Slab	No	108763.00	7500.00	116263.00	
2	Precuts	No	11209.00		11209.00	
3	Kerb Stone	No	23135.00		23135.00	
4	Manhole	No	2200.00		2200.00	
5	Sewer Inlet	No	2524.00		2524.00	
6	House Connection Chamber	No	1546.00	450.00	1996.00	

Table 17: Physical Progress in Production of RCC Pipes at Itahari

Physical Progress till April 2017						
S.N.	Description	Diameter (mm)	Progress		Total to Date (nos.)	Remarks
			Up to March 2017 (nos.)	This Month (nos.)		
1	RCC Pipe	200	2,123	0	2,123	
2	RCC Pipe	300	328	0	328	
3	RCC Pipe	350	216	0	216	
4	RCC Pipe	400	370	60	430	
5	RCC Pipe	450	84	0	84	
6	RCC Pipe	500	551	0	551	
7	RCC Pipe	600	963	0	963	
8	RCC Pipe	700	1,296	0	1,296	
9	RCC Pipe	900	278	0	278	
10	RCC Pipe	1000	1011	0	1011	
11	RCC Pipe	1600	373	0	373	
	Total		7,593	0	7,653	

Contractor's Manpower**Table 18: Contractor's key staffs in March, 2017:**

Designation	No	Remarks
Project / Contract Manager	1	
Planning Engineer/Construction Engineer	1	
Construction Engineer	2	
Site Engineers	8	
Quality Control Manager	1	
Office/Bill Engineer	0	
Junior Engineer	5	
Sub Overseers	2	
Safety Manager / Senior Site Supervisor	1	
Accountant / Office Manager	1	
Lab Assistant	3	
Store Keeper	7	
Light Drivers	4	
Machine Operator	32	
Site Supervisor	4	
Other Supporting Staff	41	
Skilled Labor at Site	>330	
Unskilled Labor at Site	>480	

Contractor's Equipment:**Table 19: Contractor's Equipment: At Judi camp**

Equipment	No	Remarks
Excavator	6	
Back Hoe JCB	13	
Grader	2	
Crane / Teller	1	
Water Tanker	5	
Tractor	16	
Tipper	4	
Light Vehicle	4	
Motorbike	10	
Kerb Stone Machine Set	1	
Generator	4	
Welding Machine	3	
Diesel Tank with Pump	1	
Stand Drill Machine	1	
Gas Cutter Set	1	
Pipe Cutter	1	
Hand Grinder	1	
Plate Compactor	2	
Monkey Jumper	1	
Concrete Batching Plant	1	
Electric Vibrator	3	
Bar Bending Machine	3	
Bar Cutter Machine	3	
Transit Mixer	0	
Concrete Mixer (Hydraulic)	2	
Concrete Mixer (Manual)	2	
Asphalt Concrete Plant	1	
Asphalt Paver Machine	1	

8. DETAILS OF SAFEGUARD ACTIVITIES (SOCIAL, ENVIRONMENTAL AND RESETTLEMENT ACTIVITIES AND ISSUES)

8.1 SOCIAL ISSUES

8.1.1 OPERATIONAL GUIDE LINES FOR COMMUNITY MOBILIZATION AND IMPLEMENTATION OF CDP

- **VISIT, INTERACTION AND CONSULTATION WITH COMMUNITY PEOPLE**

kk) Social Development Specialist (SDS) of the DSC is closely monitoring the social issues resulted due to the project activities. Visiting and interacting with people, Tole Lane Organizations (TLOs) and formal and informal consultation meetings are going on in this regard.

The project is regularly disseminating the information and message to community people about the project features, its purpose, methods of use and functionality of infrastructure under construction by the project through such consultation meetings. These meetings are fruitful to provide prior information regarding the project construction activities before execution at the community level. It is an appropriate platform to interact and make dialogue between 4 Cs (The Client, Consultant, Contractor and Community) about the project features, prime objectives, purpose, work methodology and potential threats/ cautions to be adopted during the project implementation.

The visits, meetings and consultations with community people at TLOs have provided many opportunities to obtain people's views and perception towards the project. Community people of those particular localities used to discuss extensively in the project features and have been provided some suggestions for efficient carryover of the project components and assured cooperation and coordination in the project execution in their localities.

Social Development Specialist (SDS) / DSC along with of PIU, NGO staffs have been actively participated in the meetings. SDS/DSC as usual facilitate the consultation meetings, support to prepare meeting minutes and obtain decisions.

Apart from of this, many field visits and observations with community are also important to disseminate project message and monitor project features in the community. Monitoring visits along with Project Manager (PM), TL/DSC and TL/CDP to the core project area, community development program area and construction sites have been beneficial to make insight to the project progress, its effectiveness and challenges.

- **SAFEGUARD DESK**

II) A Safeguard Desk established in the project has been effective in planning, monitoring and follow up of all social development/ safeguard issues including the resettlement plan. It has been started as a functional mechanism consisting of PIU, NGO and DSC for this purpose. The desk consists of the Social Development Chief of PIU, Team Leader of CDP/ NGO and SDS of DSC with close consultation and guidance of PM/ PIU. It is in compliance with the Aide Memoire of last ADB Mission (21 April-12 May 2014). It is decided that the desk will review, update and discuss the progress, issues, constraints and challenges of social aspects, Community Development Program and implementation of resettlement plan as well as monitoring of social development activities.

- **ToT ON GENDER AND SOCIAL INCLUSION (GESI) MAINSTREAMING**

mm) The project has been envisaged a 'Training of Trainers (ToT) on GESI Mainstreaming' for Biratnagar Sub Metropolitan City (BSMC) Office and STIUEIP project staff. The Aide Memoir Report of the ADB Review Mission has also noted about the training to be conducted in Biratnagar for the staff of municipality and related agencies. The Mission has recommended for conducting GESI training relating to urban infrastructure development to staff of municipality, municipal steering committee, PIU, local stakeholder agency and make them accountable for the better results. In line with this, the project is going to conduct Gender and Social Inclusion (GESI) Sensitization Training when it is approved. The revised ToT has been submitted to PIU, STIUEIP, Biratnagar incorporating the comments from PMSC and PCO.

Safeguard desk members discussed and reviewed the proposed 'ToT on GESI Mainstreaming' proposal. Social Development Specialist (SDS) of DSC has reviewed the detail proposal and adjusted budget accordingly for the 'Training of Trainers (ToT)' model. The training arrangement will be decided after the approval of this proposal by the project authority. Primarily it will be a 5 days training focusing mainly on Gender and Social Inclusion Action Plan (GESIAP) comprising other project elements. About 35 participants from Biratnagar Sub Metropolitan City (BSMC) office and project staffs will participate in the training.

- **Update of Small Facilities Construction and other Activities in CDP/STIUEIP**

nn) The latest safeguard desk meeting has reviewed all ongoing and completed small facilities infrastructure and other activities implemented under the Community Development Program (CDP), a component of STIUEIP. It provided a common understanding and status information of infrastructures and activities under the CDP program to all safeguard desk members.

A glimpse of community development program has been obtained by the presentation in the appraisal and interaction meeting. Total 7,417.36 m. roads and 13,246.32 m drains are under construction through small facilities infrastructure by CDP/STIUEIP. Regarding on the household toilet, total 458 nos. such toilets has been built by May 2015. Similarly, 10 hand pumps have been installed, 45 hands pump platforms built and 5 public toilets are complete.

- **Employment in Project**

oo) The core activities of the project i.e. sewerage pipe laying, drain construction and road/ lane improvement provided employment to about 270 in a day this month. The employed human resources varied from skilled engineer/ project manager to general labor, supervisor, (sub) overseers and mechanics. However, a very few women (16%) are working in the construction activities as skilled and unskilled labor but they are paid equal to men for similar type of work. Three women Assistant Sub-Engineers are also working at construction sites after completing OJT (on the job training) successfully at the same sites from different CTEVT affiliated institutes of nearby districts. The contractor has been suggested to increase the work opportunity to women in different types of works.

- **General**

pp) Sewer/ Drainage lines are being laid in the public rights of way (RoW). During construction, if any trees or crops or structures demolished, it shall be properly addressed with compensation. Private individuals or shopkeepers will also be looked into if their livelihood is affected by the disturbance during constructions/ pipe laying works.

Apart from this, the project did not encounter any resettlement or re-location and any compensation issue.

9. KEY ISSUES AND REMARKS / REASON FOR DEVIATION (IF ANY) AFFECTING PROGRESS

qq) Following are the key issues affected in progress:

- Disturbance due to underneath existing water supply pipe lines network, under-ground cables, electric poles etc.
- Some of the stretches still RoW are not clear to construct the drain and to put inlet and house connection.
- Early monsoon.
- Insufficient manpower's and materials at site.
- Disbursement of IPC's amount on time.

10. WORK PLAN FOR THE NEXT MONTH

rr) Following are the Contractor's works in the next month **(Please refer to the contractor's progress report for quantitative plan works for next month)** the revised work program shall be submitted after the approval of Variation order no-03 as discussed/agreed between three parties - 3C.

- Road side drain construction
- Road Works
- Sewer line construction
- Storm water drain construction
- Relocation of water supply pipe and laying of new pipe lines.
- WWTP
- Maintenance work as per instruction/required.
- Precast production at contractor's yard, etc.

ANNEX2: PHOTOGRAPHS – April2017



Subgrade preparation at R29 road



A view of Sump Well concreting in Bottom Plug underneath of water



Concrete of Sump Well's bottom plug at WWTP



Sampling of Concrete of Sump Well at WWTP



Sampling of Concrete of Sump Well at WWTP



Rip Rap masonry work at WWTP



Cleaning of Sewer Manhole at R4 Road



Storm Water Drain at CN3L1A stretch



DI Pipe of Water Supply at R6 Road



Storm Water Drainage near CBR Chowk at S9 Road



Sub Base preparation at R21 Road

Annex-7

: Laboratory Test Results of April, 2017

SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitan City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)
FOR THE MONTH OF APRIL 2017

Description : Field Density Tests on

FDT -74: R-3 Line 5+660 to 5+830 Dharam badh Road

FDT-75: T3L25B & T3L25 C Line

FDT-76 : R-8, T3L25A Bhagwati Marg Madhu Mara Road

FDT-77 :WWTP Out Side Boundary Wall Road 0+000 to 0+650

SUB GRADE

P.G-1

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT 74	1/4/2017	5+700 LHS	1.95	98.48	8.0	15.0
2			5+750 RHS	1.93	97.47	6.0	15.0
3			5+800 CL	1.9	96.96	7.0	15.0
4			5+830 LHS	1.89	95.45	6.0	15.0
1	FDT 75	6/4/2017	1+150 CL	1.90	96.17	6.0	15.0
2			1+100 LHS	1.95	98.26	6.0	15.0
3			1+020 RHS	1.94	98.11	7.0	15.0
1			0+020 CL	1.92	97.11	6.0	15.0
2			0+040 LHS	1.89	95.40	8.0	15.0
1	FDT 76	10/4/2017	0+100 CL	1.94	97.98	2.00	15.0
2			0+050 RHS	1.93	97.48	4.00	15.0
3			0+020 LHS	1.89	95.45	2.00	15.0
1	FDT 77	14/4/2017	0+030 LHS	1.93	97.47	2.00	15.0
2			0+080 RHS	1.92	96.97	4.00	15.0
3			0+130 CL	1.95	98.48	4.00	15.0
4			0+180 LHS	1.94	98.98	3.00	15.0
5			0+230 RHS	1.90	95.96	4.00	15.0
6			0+300 CL	1.93	97.47	4.00	15.0
7			0+380 LHS	1.94	97.98	4.00	15.0
8			0+460 RHS	1.91	96.46	4.00	15.0
9			0+540 CL	1.94	97.98	4.00	15.0
10			0+600 LHS	1.95	98.48	4.00	15.0
11			0+620 RHS	1.91	96.46	3.00	15.0
12			0+640 CL	1.90	95.96	3.00	15
Required				1.980	95%	OMC <9.00	
SMEC-Brisbane -AQUA-CEMAT-BDA Approved by C.S.E Test Checked by A.C.S.E Consultant Reps				CTCE-KALIKA J/V Submitted by Project Manager Test Conducted by Q.C Manager Contractors Reps			



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitan City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)
FOR THE MONTH OF APRIL 2017

Description : Field Density Tests on

FDT -78 : R21 Line 0+750 to 1+120

FDT-79: R26/ T2L19 C Line 0+000 to 0+305

FDT-80 : R-21 Bhumi Prashan Chowck 0+000 to 0+200

FDT-81: R-25 Line Devi Marg 0+150 to 0+230

FDT-82: T1L16 C 0+000 to 0+170

FDT-83: T1L16 A 0+000 to 0+140

SUB GRADE

P.G-2

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT 78	15/4/2017	0+800 CL	1.94	97.98	4.0	15.0
2			0+850 LHS	1.96	98.99	3.0	15.0
3			0+910 RHS	1.90	95.96	3.0	15.0
4			0+990 LHS	1.92	96.97	4.0	15.0
5			1+020 RHS	1.92	96.97	3.0	15.0
6			1+080 CL	1.92	96.97	4.0	15.0
1	FDT 79	21/4/2017	0+025 LHS	1.91	96.46	7.0	15.0
2			0+080 RHS	1.95	98.48	7.0	15.0
3			0+120 CL	1.89	95.45	4.0	15.0
4			0+170 LHS	1.93	97.47	4.0	15.0
5			0+230 RHS	1.94	97.98	4.0	15.0
6			0+290 RHS	1.95	98.48	5.0	15.0
1	FDT 80	21/4/2017	0+170 LHS	1.92	97.21	7.00	15.0
2			0+090 RHS	1.94	98.03	8.00	15.0
3			0+030 CL	1.90	95.82	7.00	15.0
1	FDT 81	21/4/2017	0+160 LHS	1.92	97.09	7.00	15.0
2			0+220 RHS	1.89	95.38	7.00	15.0
1	FDT 82	21/4/2017	0+010 LHS	1.93	97.45	3.00	15.0
2			0+060 RHS	1.92	97.16	5.00	15.0
3			0+120 CL	1.94	98.20	7.00	15.0
4			0+160 LHS	1.91	96.30	4.00	15.0
1	FDT83	21/4/2017	0+010 LHS	1.92	97.08	7.00	15.0
2			0+060 RHS	1.92	97.21	7.00	15.0
3			0+120 CL	1.91	96.61	7.00	15.0

Required

1.980

95%

OMC <9.00

SMEC-Brisbane -AQUA-CEMAT-BDA
 Approved by C.S.E
 Test Checked by A.C.S.E
 Consultant Reps

CTCE-KALIKA J/V
 Submitted by Project Manager
 Test Conducted by Q.C Manager
 Contractors Reps



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT							
Biratnagar Sub-Metropolitan City							
SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)							
FOR THE MONTH OF APRIL 2017							
Description : Field Density Tests on							
FDT -84: T1L16 B Line 0+000 to 0+204							
FDT-85 : R21 Line 0+170 to 0+390 Bhumi Prashan Chowck							
FDT-86: R78 Line 0+000 to 0+093							
FDT-87: R-10 Line 0+000 to 0+220							
FDT-88 : R76 Line 0+000 to 0+273							
FDT-89 : R-4 Line National Trading to Jatuwa Road 0+000 to 0+263							
SUB GRADE						P.G-3	
S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT 84	21/4/2017	0+025 LHS	2.08	96.3	6.0	15.0
2			0+085 CL	2.1	97.22	5.0	15.0
3			0+150 RHS	2.14	99.07	4.0	15.0
4			0+200 LHS	2.14	99.07	3.0	15.0
Required				2.160	95%	OMC <7.0	
1	FDT 85	22/4/2017	0+190 LHS	1.94	97.98	8.0	15.0
2			0+240 RHS	1.91	96.46	7.0	15.0
3			0+300 CL	1.91	96.46	7.0	15.0
4			0+350 LHS	1.91	96.46	5.0	15.0
5			0+380 RHS	1.85	93.43	3.0	Re rolled
6			0+380 RHS	1.95	98.48	4.0	Re Tested
1	FDT 86	22/4/2017	0+020 LHS	1.89	95.45	6.00	15.0
2			0+090 RHs	1.90	95.96	5.00	15.0
1	FDT 87	25/4/2017	0+200 LHS	1.93	97.98	6.00	15.0
2			0+150 RHS	1.90	96.46	5.00	15.0
3			0+100 CL	1.91	96.46	6.00	15.0
4			0+030 RHS	1.93	97.98	6.00	15.0
1	FDT 88	27/4/2017	0+030 LHS	1.93	97.57	4.00	15.0
2			0+080 RHS	1.91	96.26	4.00	15.0
3			0+140 CL	1.94	97.87	4.00	15.0
4			0+210 LHS	1.95	98.24	4.00	15.0
5			0+240 RHS	1.95	98.23	4.00	15.0
6			0+270 LHS	1.93	97.57	3.00	15.0
1	FDT89	27/4/2017	0+250 RHS	1.96	98.79	7.00	15.0
2			0+200 LHS	1.93	97.70	6.00	15.0
3			0+150 RHS	1.97	99.57	7.00	15.0
4			0+100 CL	1.93	97.70	6.00	15.0
5			0+030 RHS	1.94	97.88	7.00	15.0
6			0+005 CL	1.94	97.88	4.00	15.0
Required				1.980	95%	OMC <9.00	
SMEC-Brisbane -AQUA-CEMAT-BDA Approved by C.S.E Test Checked by A.C.S.E Consultant Reps				CTCE-KALIKA JV Submitted by Project Manager Test Conducted by Q.C Manager Contractors Reps			

SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City

**SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)
FOR THE MONTH OF APRIL 2017**

Description : Field Density Tests on

FDT -90 :R-29 Line East Side Shanti Marg 0+000 to 0+180

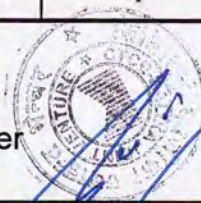
FDT-91 : R-9 Line 0+000 to 0+117

FDT-92 ;R-37 Line 0+280 to 0+469

SUB GRADE

P.G-4

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT 90	24/4/2017	0+160 RHS	1.96	98.84	5.0	15.0
2			0+110 LHS	1.91	96.46	5.0	15.0
3			0+060 RHS	1.91	96.46	4.0	15.0
4			0+020 LHS	1.92	96.97	5.0	15.0
1	FDT 91	29/4/2017	0+100 LHS	1.91	96.46	5.0	15.0
2			0+050 CL	1.92	96.97	5.0	15.0
3			0+010 RHS	1.91	96.46	5.0	15.0
Required				1.980	95%	OMC <9.00	
1	FDT 92	30/4/2017	0+290 CL	2.12	97.25	5.00	15.0
2			0+350 LHS	2.13	97.71	4.00	15.0
3			0+410 RHS	2.12	97.25	5.00	15.0
4			0+450 LHS	2.15	98.47	6.00	15.0
Required				2.180	95%	OMC <6.50	
SMEC-Brisbane -AQUA-CEMAT-BDA Approved by C.S.E Test Checked by A.C.S.E Consultant Reps				CTCE-KALIKA J/V Submitted by Project Manager Test Conducted by Q.C Manager Contractors Reps			



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)

SUB BASE LAYER

For The Month of APRIL 2017

FDT-56: R-4 Road National Trading to Jatuwa Road 0+970 to 1+320

FDT-57: R-10 Line 0+840 to 0+620

FDT-58: R-5 College Road 2+000 to 2+240

FDT-59: R76 Line 0+000 to 0+273

S.N.	L/Ref. No.	Date	Location/ Area	MDD Gm/CC	Degree of Compaction, %		Remarks /Thickness
1	FDT-56	26/4/2017	1+000 LHS	2.11	95.03	4.00	15.0
2			1+005 CL	2.12	95.30	4.00	15.0
3			1+110 RHS	2.12	95.50	4.00	15.5
4			1+160 LHS	2.17	97.86	5.00	15.5
5			1+240 RHS	2.21	99.45	5.00	15.0
6			1+300 LHS	2.15	96.85	5.00	15.0
1	FDT-57	28/4/2017	0+840 RHS	2.2	99.10	7.00	16
2			0+765 LHS	2.20	99.10	6.00	15.0
3			0+700 RHS	2.16	97.08	5.00	15.0
4			0+680 LHS	2.14	96.40	6.00	15.0
5			0+650 RHS	2.20	99.10	5.00	15.0
6			0+620 LHS	2.20	99.10	6.00	15.0
1	FDT-58	29/4/2017	2+220 LHS	2.13	95.95	4.00	16.0
2			2+160 RHS	2.14	96.40	3.00	15.0
3			2+110 LHS	2.12	95.50	4.00	15.0
1	FDT-59	29/4/2017	0+040 LHS	2.19	98.65	4.00	15.0
2			0+090 RHS	2.21	99.55	6.00	15.0
3			0+160 LHS	2.18	98.20	6.00	14.5
4			0+210 RHS	2.13	95.95	6.00	15.0
5			0+265 CL	2.18	98.20	6.00	15.0
Required				2.220	95%	OMC <9.50	15 CM

SMEC-Brisbane -AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

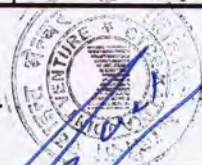
Consultant Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractors Reps



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)

SUB BASE LAYER

For The Month of APRIL 2017

FDT-51 :R-25 Line Devi Marg 0+150 to 0+230

FDT-52: R26 Line /T2L19C 0+000 to 0+306

FDT-53 : T1L16 B Hotel Panchali Road 0+000 to 0+204

FDT-54: T1L16 C Line 0+000 to 0+170 Prasant Girl Hostel Road

FDT-55 : T1L16 A Line 0+000 to 0+140 Hotel Xenial Road

S.N.	L/Ref. No.	Date	Location/ Area	MDD Gm/CC	Degree of Compaction, %		Remarks /Thickness
1	FDT-51	25/4/2017	0+160 RHS	2.13	95.95	5.00	15.0
2			0+210 LHS	2.13	95.95	5.00	15.0
1	FDT-52	25/4/2017	0+030 LHS	2.19	98.67	8.00	15.5
2			0+090 RHS	2.15	96.99	7.00	15.0
3			0+160 CL	2.14	96.27	5.00	15.0
4			0+210 LHS	2.19	98.67	5.00	14.5
5			0+280 RHS	2.17	97.63	5.00	15.5
6			0+300 LHS	2.17	97.63	6.00	15.0
1	FDT-53	26/4/2017	0+200 RHS	2.21	99.39	7.00	14.5
2			0+110 LHS	2.12	95.44	4.00	15.0
3			0+050 CL	2.18	98.15	7.00	15.0
4			0+030 RHS	2.18	98.15	8.00	15.0
5			0+010 CL	2.19	98.87	8.00	15.5
1	FDT-54	26/4/2017	0+020 LHS	2.20	99.15	6.00	15.0
2			0+080 CL	2.18	98.37	8.00	15.0
3			0+140 RHS	2.19	98.67	6.00	15.0
1	FDT-55	24/4/2017	0+050 LHS	2.19	98.75	8.00	15
2			0+130 RHS	2.19	98.75	7.00	15
3			0+170 LHS	2.17	97.58	8.00	15.5
Required				2.220	95%	OMC <9.50	15 CM

SMEC-Brisbane -AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractors Reps



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitan City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)

SUB BASE LAYER

For The Month of APRIL 2017

FDT-46: R-37 Line 0+000 to 0+194

FDT-47: R114 Panchali Road 0+00 to 0+300

FDT-48: WWTP INNER ROAD Sourthen & Western Line 0+00 to 0+185

FDT-49: R-21 Line 0+0750 to 1+100

FDT-50 :R21 Line 0+000 to 0+390 Bhumiprashan Chowck

S.N.	L/Ref. No.	Date	Location/ Area	MDD Gm/CC	Degree of Compaction, %		Remarks /Thickness
1	FDT-46	13/4/2017	0+035 LHS	2.21	99.64	8.00	14.0
2			0+090 RHS	2.21	99.64	4.00	15.0
3			0+110 LHS	2.21	99.64	4.00	16.0
4			0+140 CL	2.20	99.05	5.00	15.5
5			0+190 LHS	2.20	99.05	8.00	15.0
1	FDT-47	17/4/2017	0+300 LHS	2.21	99.55	5.00	14.5
2			0+280 LHS	2.17	97.75	6.00	15.5
3			0+200 RHS	2.18	98.20	5.00	15.0
4			0+150 CL	2.13	95.95	3.00	14.5
5			0+100 LHS	2.18	98.20	6.00	15.5
6			0+040 RHS	2.14	96.40	6.00	15.0
1	FDT-48	19/4/2017	0+185 LHS	2.20	99.09	2.00	16.0
2			0+135 RHS	2.19	98.65	4.00	12.5
3			0+080 CL	2.17	97.75	4.00	17.0
4			0+020 RHS	2.12	95.50	2.00	15.0
1	FDT-49	20/4/2017	0+850 CL	2.20	99.10	5.00	14.0
2			0+905 LHS	2.16	97.30	7.00	12.0
3			0+970 RHS	2.19	98.65	6.00	16.0
4			1+010 LHS	2.12	95.50	2.00	15.5
5			1+060 CL	2.21	99.55	7.00	17.0
1	FDT-50	24/4/2017	0+050 LHS	2.16	97.30	6.00	16
2			0+130 RHS	2.21	97.30	7.00	15.5
3			0+170 LHS	2.21	97.30	7.00	15
4			0+200 RHS	2.17	97.75	7.00	14.5
5			0+300 CL	2.14	96.40	7.00	15

Required

2.220

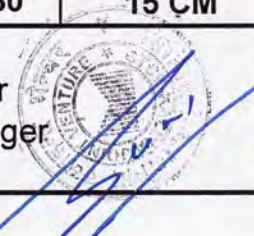
95%

OMC <9.50

15 CM

SMEC-Brisbane -AQUA-CEMAT-BDA
 Approved by C.S.E
 Test Checked by A.C.S.E
 Consultant Reps

CTCE-KALIKA J/V
 Submitted by Project Manager
 Test Conducted by Q.C Manager
 Contractors Reps



SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

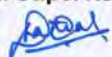
Biratnagar-Sub-Metropolitant City

SUMMARY OF MORTAR COMPRESSIVE STRENGTH TEST WORK MIX CUBE

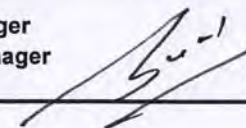
FOR THE MONTH OF APRIL 2017



P.G-1

S.N.	LAB REF No.	Name of CEMENT	Location/Structure	Details of MIX	Casting	Consistency & Setting Time			7 day's cube Crushing		28 day's cube crushing		Remarks
						Norm. Const.	Intial(min.)	Final(min.)	Date	Str. N/mm2	Date	Str. N/mm2	
1	743	KOSHI	WWTP	1:4 by volume	4/3/2017	36.70	190	305	11/3/2017	5.90	1/4/2017	7.80	
2	744	KOSHI	High way Man Hole	1:4 by volume	4/3/2017	36.70	190	305	11/3/2017	6.00	1/4/2017	7.90	
3	745	KOSHI	High way Man Hole	1:4 by volume	4/3/2017	36.70	190	305	11/3/2017	6.00	1/4/2017	7.90	
4	746	KOSHI	High way Man Hole	1:4 by volume	5/3/2017	36.60	205	285	12/3/2017	6.00	2/4/2017	8.00	
5	747	KOSHI	High way Man Hole	1:4 by volume	5/3/2017	36.60	205	285	12/3/2017	5.90	2/4/2017	8.00	
6	748	KOSHI	WWTP	1:4 by volume	6/3/2017	36.60	215	290	13/3/2017	5.70	3/4/2017	7.90	
7	749	KOSHI	High way Man Hole	1:4 by volume	6/3/2017	36.60	215	290	13/3/2017	5.90	3/4/2017	7.90	
8	750	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	6/3/2017	36.60	215	290	13/3/2017	6.40	3/4/2017	9.30	
9	751	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	18/3/2017	36.00	180	310	25/3/2017	6.50	15/4/2017	9.40	
10	752	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	26/3/2017	37.70	205	315	2/4/2017	6.10	23/4/2017	9.30	
11	753	KOSHI	T3- R25 Line	1:4 by volume	26/3/2017	37.70	205	315	2/4/2017	6.00	23/4/2017	7.80	
12	754	KOSHI	S-9 Line	1:4 by volume	28/3/2017	38.30	190	330	4/4/2017	6.10	25/4/2017	7.90	
13	755	KOSHI	R-21 Line	1:4 by volume	29/3/2017	38.60	180	315	5/4/2017	6.30	26/4/2017	8.00	
14	756	KOSHI	Cut of Wall WWTP	1:4 by volume	30/3/2017	39.00	180	345	6/4/2017	5.60	27/4/2017	7.80	
15	757	KOSHI	Cut of Wall WWTP	1:4 by volume	31/1/2017	39.40	180	335	7/4/2017	5.70	28/4/2017	8.00	
16	758	KOSHI	Cut of Wall WWTP	1:4 by volume	1/4/2017	39.40	180	335	8/4/2017	5.90	29/4/2017	8.00	
							MIN 45m	Max 600m	Required strength on 28 days not less than 7.5 N/MM2				
							MIN 45m	Max 600m	Required strength on 28 days More than 7.5 N/MM2 at 1:3				

SMEC-Brisbane-AQUA-CEMAT-BDA
 Approved by Construction Supervision Engineer/CSE
 Test Checked by A.C.S.E 
 Consultants Reps

CTCE-KALIKA J/V
 Submitted by Project Manager
 Test conducted by Q.C Manager
 Contractore Reps




SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT													
Biratnagar Sub-Metropolitant City													
SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 , M25/20 & M30/20 Work Mix													
FOR THE MONTH OF APRIL 2017											P.G-1		
S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Type of Material		Cube Crushing ,N/mm2		Remarks
					water	Cement	Sand	Aggregates	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	730	9/3/2017	M25 Work Mix	S-9 Line Top Slab	0.46	1	1.5	3.25	Shivam	Om shree C/plant	20.37	27.26	
2	731	10/3/2017	M20 Work Mix	SLUDGE BED	0.50	1	2	3.5	Shivam	Om shree C/plant	16.74	22.00	
3	732	22/3/2017	M20 Work Mix	WWTP PCC Facualty pond	0.50	1	2	3.5	Shivam	Om shree C/plant	17.63	22.81	
Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength											Min Required	13.4	20
Specifacation Limit Table For M25/20 on 7 days Age Min 67% of Total Compressive Strength											Min Required	16.75	25
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength											Min Required	20.1	30
SMEC-Brisbane-AQUA-BDA					CTCE-KALIKA J/V								
Approved by Construction Supervision Engineer/CSE					Submitted by Project Manager								
Test checked by A.C.S.E 					Test conducted by Q.C Manager								
Consultants Reps					Contractors Reps 								



SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of APRIL 2017

P.G-1

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
1	MR 291	SHIVAM OPC	1/4/2017	36.0	186	310	All Cement Are Nepali BRAND
2	MR 292	SHIVAM OPC	2/4/2017	36.5	180	300	
3	MR 293	SHIVAM OPC	3/4/2017	35.8	200	295	
4	MR 294	SHIVAM OPC	4/4/2017	36.2	190	305	
5	MR 295	SHIVAM OPC	5/4/2017	36.4	205	295	
6	MR 296	SHIVAM OPC	6/4/2017	36.2	215	290	
7	MR 297	SHIVAM OPC	7/4/2017	35.6	210	295	
8	MR 298	SHIVAM OPC	8/4/2017	35.6	190	280	
9	MR 299	KOSHI OPC	9/4/2017	35.2	185	295	OPC
10	MR 300	KOSHI OPC	10/4/2017	36.1	175	305	
11	MR 301	KOSHI OPC	11/4/2017	36.3	180	285	
12	MR 302	KOSHI OPC	12/4/2017	35.8	205	285	
13	MR 303	KOSHI OPC	13/4/2017	36.7	185	290	
14	MR 304	KOSHI OPC	14/4/2017	36.3	190	305	
15	MR 305	KOSHI OPC	15/4/2017	37.0	195	315	
Requirements in accordance with BS 12/4027					> 45 Min.	10 Hrs	

SMCE-Brisbane-AQUA-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractores Reps



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City

SUMMARY OF LAB TEST RESULT OF SUB GRADE

(For the Month of APRIL 2017)

P.G-1

S.N.	LAB REF. NO.	DESCRIPTION OF MATERIAL	Line	Change/Location	Modified Proctor Gm/CC		CBR %	REMARKS
					MDD	OMC %		
1	MR 74	Sub Grade	R3 Road	5+660 to 5+830	1.980	9.00	6.00	
2	MR 75	Sub Grade	T3L25B/C	0+00 to 1+165	1.980	9.00	5.60	
3	MR 76	Sub Grade	R-8 & T3L25A	0+00 to 1+110	1.980	9.00	6.50	
4	MR 77	Sub Grade	WWTP out side Road	0+000 to 0+330	1.980	9.00	5.50	
5	MR 77	Sub Grade	WWTP inside Road	0+000 to 0+090	1.980	9.00	5.5	south & West
6	MR 78	Sub Grade	R-21 Line	0+750 to 1+120	1.980	9.00	6.0	
7	MR 79	Sub Grade	R-26 & T2L19C	0+000 to 0+300	1.980	9.00	6.5	
8	MR 80	Sub Grade	R21 Bhumi prashan	0+000 to 0+200	1.980	9.00	5.4	
9	MR 81	Sub Grade	R25 Devi Marg	0+150 to 0+230	1.980	9.00	6.0	
10	MR 82	Sub Grade	T1L16C	0+000 to 0+170	1.980	9.00	6.0	
11	MR 83	Sub Grade	T1L16A	0+000 to 0+140	1.980	9.00	6.0	
12	MR 84	Sub Grade	T1L16B	0+00 to 0+204	2.160	7.00	7.5	
13	MR 85	Sub Grade	R21 Bhumi prashan	0+190 to 0+390	1.980	9.00	5.3	
14	MR 86	Sub Grade	R-78 Line	0+000 to 0+093	1.980	9.00	6.75	
15	MR 87	Sub Grade	R-10 Line	0+000 to 0+220	1.980	9.00	6.70	
16	MR 88	Sub Grade	R-76 Line	0+000 to 0+273	1.980	9.00	6.65	
							Min 5%	

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps



CTCE-KALIKA JV

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractors Reps




SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT								
Biratnagar Sub-Metropolitan City								
SUMMARY OF LAB TEST RESULT OF SUB GRADE (For the Month of APRIL 2017)								P.G-2
S.N.	LAB REF. NO.	DESCRIPTION OF MATERIAL	Line	Change/Location	Modified Proctor Gm/CC		CBR %	REMARKS
					MDD	OMC %		
17	MR 89	Sub Grade	R-4 Line	0+000 to 0+263	1.980	9.00	6.00	
18	MR 90	Sub Grade	R-29 East Side	0+000 to 0+180	1.980	9.00	6.50	
19	MR 91	Sub Grade	R-9 Line	0+000 to 0+117	1.980	9.00	5.80	
20	MR92	Sub Grade	R-37 Line	0+280 to 0+469	2.180	6.50	7.75	
							Min 5%	

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA JV

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractors Reps

SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitan City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF APRIL 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	305	4/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.2	
2	306	5/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.6	31.1	
3	307	6/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.5	31.1	
4	308	7/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.5	31.3	
5	309	8/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	30.9	
6	310	9/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.1	
7	311	10/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.3	30.9	
8	312	11/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.2	30.9	
9	313	12/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.1	31.4	
10	314	13/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.5	31.3	
11	315	14/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	31.5	
12	316	15/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.7	31.1	
13	317	16/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.1	
14	318	17/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.4	
15	319	18/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.5	31.6	
16	320	19/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.6	
17	321	20/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	30.5	31.3	

Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength

Min Required 20.1 30

SMEC-Brisbane-AQUA-BDA

Approved by Construction Supervision Engineer/CSE

Test checked by A.C.S.E

Consultants Reps

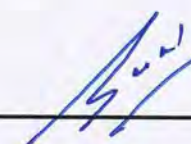


CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractors Reps




SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF APRIL 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
18	322	21/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.4	
19	323	22/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.5	31.2	
20	324	23/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.5	
21	325	24/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.8	31.3	
22	326	25/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	31.7	
23	327	26/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	31.3	
24	328	27/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.3	
25	329	28/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.7	
26	330	29/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.8	31.6	
27	331	30/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.7	31.6	
28	332	31/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.6	31.5	
29	333	1/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.3	
30	334	2/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.6	
31	335	3/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.6	

Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength

Min Required 20.1 30

SMEC-Brisbane-AQUA-BDA

Approved by Construction Supervision Engineer/CSE

Test checked by A.C.S.E

Consultants Reps

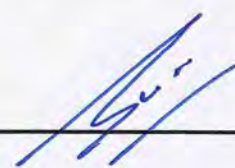


CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractors Reps




**SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING WORK MIX
FOR THE MONTH OF APRIL 2017**


Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength		Min Required	13.4	20
SMEC-Brisbane-AQUA-BDA Approved by Construction Supervision Engineer/CSE Test checked by A.C.S.E Consultants Reps	CTCE-KALIKA J/V Submitted by Project Manager Test conducted by Q.C Manager Contractors Reps			

**SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING WORK MIX
FOR THE MONTH OF APRIL 2017**

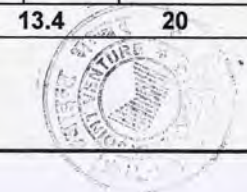
Specification Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength		Min Required	13.4	20
SMEC-Brisbane-AQUA-BDA Approved by Construction Supervision Engineer/CSE Test checked by A.C.S.E Consultants Reps		CTCE-KALIKA J/V Submitted by Project Manager Test conducted by Q.C Manager Contractors Reps		

20

Contractors Reps

.E 

[Signature]



Annex-8

: Contractor's progress report-April, 2017

**Government of Nepal
Biratnagar Sub-Metropolitan City, Biratnagar, Nepal
Secondary Towns Integrated Urban Environment Improvement Project
(STIUEIP)
Project Implementation Unit(PIU)
Biratnagar, Nepal**

Project Directorate (ADB)

**Sewerage and Drainage Network, Wastewater Treatment Plant, and Road and
Lanes Improvement Subproject
STIUEIP/W/BRT/ICB-01**

Monthly Progress Report – 41

April 2017



Consultants:



in association with
Brisbane City Enterprise Pty Ltd – Australia
AQUA Consultant and Associates Ltd – Bangladesh
Building Design Authority – Nepal
CEMAT Consultants – Nepal

Submitted by:

CTCE/KALIKA JOINT VENTURE

Address: Kalika tower-6th floor, Baluwatar, Kathmandu, Nepal. Tel: 01-4439152, 4439153, 4439154, Fax: 01-4439155.

E-mail: info@kalikagroup.com, Site Office: Kathari Tel. 9852024596 E-mail: kalikabrt@gmail.com

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1. Introduction
2. Project Component
3. Salient Feature
4. Scope of Work
5. Physical Progress (Achievement in up to this Month)
 - a. Storm Drainage and Road Side Drain
 - b. Sewerage
 - c. Road and lane
 - d. Waste Water Treatment Plant
 - e. Production of Precast Slab at yard
 - f. Production of precast chamber element at yard
 - g. Hume pipe Production
6. Financial Progress and Cash Flow
7. Details of Safeguard Activities
8. Key Issues and Remarks
9. Resource Plan
 - a. Details of Contractor's Personnel's at site
 - b. Equipment's at Site
 - c. Material at Site
10. Conclusion

ANNEX

- i. Organization Chart
- ii. Site Photographs
- iii. Lab Reports

1 Introduction

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), 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 2650-NEP. STIUEIP includes construction of Sewerage and Drainage Network, Wastewater Treatment Plant, Road and Lanes Improvement and additional of road side drain & water supply work. The main purpose of this project is to fascinate with better improvement of greenery urban city.

2 Project Components

The Town Integrated Urban Environmental Improvement Project (STIUEIP) consists of following Sub-Project Components:

➤ **Drainage Network**

The main aim of drainage network is to drain out storm water to the river side during the monsoon season and minimized the water pounding in the city

➤ **Sewerage Network**

Management of household sewerage project to the treatment plant in connection with chambers, manhole and pipes

➤ **Wastewater Treatment Plant Subproject**

Treatment of sewer product in plant located at Jatuwa. The treated water is drain out to singhiya river and solid waste project used as fertilizer in farming.

➤ **Road and Lanes Improvement Subproject**

Existing road sections at different part of Biratnagar will be upgraded by extending road width and providing footpath.

➤ **Road Side Drain and Water Supply Network (Additional)**

Road side drain and water supply network is addition of scope of work in this project. Road side drain is proposed to discharge the rain water. Whereas water supply work is for relocation of existing water pipe lines to appropriate location as well as repair of damaged pipe lines during construction

3 Salient Feature

A. General Features	
Employer	Government of Nepal(GoN), Ministry of Urban Development Department of Urban Development and Building Construction
Funded By	Asian Development Bank & Government of Nepal
Project	Biratnagar Sub-Metropolitan City Secondary Towns Integrated Urban Environmental Improvement Project(STIUEIP)
Contract No.	STIUEIP/W/BRT/ICB-01
Location	Biratnagar Sub-Metropolitan City
Consultant	SMEC-Brisbane-AQUA-BDA-CEMAT
Contractor	CTCE-KALIKA JV.
Commencement Date	December 8th, 2013
Original Completion Date	25 May 2016
Revised Completion Date	EOT-2 under process
Original Contract Period	900 Days
Original Contract amount with PS & VAT	NRs 2,391,332,117.06
Revised Contract amount after VO # 03. with PS & VAT	NRs 2,956,290,542.71

4 Scope of works

The activities to be undertaken according to the Contract Agreement are as follows:

- a. To carry out all necessary topographic surveys, soils investigations, laboratory analysis or related investigations where necessary to supplement the data provided by the Employer.
- b. To prepare working drawings for all elements of the Works.
- c. To undertake all steps necessary for upgrading of roads and bridges, all related to access to the Site, or other related matters, where his opinion differs significantly from
- d. Preparation of stockyards for pipes, fittings and other materials and equipment.
- e. To take all steps necessary for the temporary or permanent diversion of services and the maintenance of services during the execution of the Works, including diversion of overhead with underground power lines, telephone ducts, water supply mains and distribution lines (pipes), sewers and other underground services as required along the route of the pipelines.
- f. To supply all pipes, valves, fittings and other materials and equipment required for construction of the Works. The Contractor's supply items may include manufacture, collection, transportation and delivery to Site. The Contractor will be responsible for ensuring that all procedures are adequately covered and that the materials fully confirm to the Contract requirements. These responsibilities will include all necessary charges or dues related to insurance, freight, taxes (including customs and excise duties, surcharges etc.) and all testing and inspections for quality control.
- g. To provide all necessary staff (including civil engineers, specialists, administrators, site supervision personnel) and workmen (including all necessary specialists, operators, tradesmen, artisans etc. in addition to semi-skilled and unskilled workers) necessary for execution of the Works through to completion. Where appropriate, the contractor shall provide all suitable facilities and accommodation for the staff and workmen and he shall make provision for all costs related to such provisions and for medical, re-location, taxes or other expenses.
- h. To provide all equipment, machinery, tools etc. and related spares maintenance and consumables necessary for implementation of the Works.
- i. To provide all site offices, stores, workshops and facilities necessary for use by the Employer, Engineer and support staff and for the Contractor himself and his supporting staff.
- j. To undertake all operations necessary to complete the Works. These operations shall include: excavation, provision, haulage and installation of suitable bedding and backfill

material and disposal of surplus excavated material; distribution, laying adjoining of pipes; installation of all special pipe work, valves etc. and construction of all related concrete or other activities together with all testing and disinfection of completed Works. The Contractor's attention is drawn to the restricted working space between Rajbanshi Chowk to Rani, Biratnagar where the sewer pipes, drains and road/lane is to be laid in a narrow road. In this section work in addition to that associated with the trunk main, will include but not be limited to, removal and replacement of a sewer laid in the road and reinstatement of road surface.

- k. To liaise with other contractors on the site and to ensure harmonious co-operation with them so that conflicts are avoided and areas of common interest, constructional interface or potential overlaps are addressed without cost to the Employer or delays in completion.
- l. To prepare documentary records of the Works in the form of "as-built" drawings and GIS data, schedules etc., and to train staff of the Employer in the procedures for laying pipes, valves and fittings.
- m. All the above activities shall be performed in a professional way and with good engineering and/or constructional practice. Upon completion of the Works the scheme shall be fully operational with minimum disruption or inconvenience to interested parties, including land owners, and there shall be no outstanding matters requiring attention.

5. Physical Progress (Achievement till the month)**A. Storm Water Drain and Road Side Drain Sub-Project (Work Progress till the date)**

Physical Progress till March 2017						
S.N.	Location	Proposed Length (m)	Progress		Total to Date (m)	Progress (%)
			Up to March 2017 (m)	This Month (m)		
1	B1	4,003.55	3758.00	90	3848	96.11
2	B2	3,724	3724.00		3724	100.00
3	B3	3505.02	3463.00		3463.00	98.80
4	S5	1201	1201.00		1201.00	100.00
5	S9	3558.22	2623.00	20	2643.00	74.27
6	S11	1350.60	1350.60		1350.60	100.00
7	S13	5000.21	4864.00		4864.00	97.28
8	CN2	2197.30	2142.00	109.4	2251.4	97.48
9	CN3	2563.77	1698.15	71.7	1769.15	69.00
10	Rani	6486.70	6463.28		6463.28	99.64
	Total	33,383.05	31,287.03	291.1	31578.13	94.59

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Physical Progress in Road Side Drains:

Physical Progress till March 2017							
S.N.	Location	Length (m)	Total Length (m)	Progress		Total to Date (m)	Progress (%)
				Up to March. 2017 (m)	This Month (m)		
1	R2	3420	6840	6475	165	6640	97.08
2	R3	2233	2993	2964	90	2964	99.03
3	R4	1246	2212	660		660	29.83
4	R5	1068	2136	2136	596	2136	100
5	R6	1280	2560	0		0	0
6	R7	485	615	560	185	745	100
7	R8	370	740	732	32	764	100
8	R9D	116	232	200	200	200	86.20

9	R13	220	440	430	30	430	97.72
10	R16	580.0	1160	1160	160	1160	100
11	R21	2420	2420	2350	70	2420	100
12	R22	359	718	718	42	718	100
13	R24	390	780	780	60	780	100
14	R25	594	1188	1180	200	1180	99.32
15	R26	620	1240	1240	342	1240	100
16	R27	977	1954	1850	100	1950	99.79
17	R28	620	1240	700		700	56.45
18	R29	620	1240	606	300	906	73.06
19	R30	328	656	600	600	600	91.46
20	R31	187	374	374	204	374	100
21	R32	189	378	0		0	0.00
22	R37	785	1570	1200	370	1570	100
23	R64	120	120	120		120	100
24	R78	92	184	82		82	44.56
25	R107	157	314	255	60	315	100
26	R108	96	192	190	20	190	98.95
27	R109	90	360	355		355	98.61
28	T2L18O	143	286	268		268	93.71
29	T3L26E	93	186	48		48	25.81
30	T2L19R	177	354	0		0	0.00
31	T2L19P	103	206	0		0	0.00
32	T2L19U	81	162	0		0	0.00
33	T3L28	74.0	148.0	145		145	97.97
	Road Side Drain		36050	28134	1212	29346	81.40

B. Sewerage Sub-Project (Work Progress till the date)

S.N .	Location	As per VO-3		Upto Previous Month		This month		Update work		% work		Remarks
		Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	
1	HDPE (T1)	3817.100	127	3362.50	122	176.000	3	3801.5	125			
2	HDPE (T2)	13595.400	485	12811.15	447	229.500	5	13040.650	452			
3	HDPE (T3)	6947.100	258	6571.10	238	0.000	0.00	6571.100	238			
4	HDPE (T4)	117.300	3	112.00	3	0.000	0.00	112.000	3			
5	Sub Total (HDPE)	24476.900	873	23119.750	810	405.500	8	23525.250	818	96.11	93.70	
6	Hume pipe(T1)	5026.800	144	2799.25	84	1621.950	23.00	4421.200	107			
7	Hume pipe(T2)	9488.000	276	7820.00	209	704.400	13.00	7820.000	222			
8	Hume pipe(T3)	4493.300	136	2851.50	63	490.000	13.00	2851.500	76			
9	Hume pipe(T4)	183.500	5	185.	5	0.000	0.00	185.000	5			
10	Sub Total (Hume pipe)	19191.600	561	13655.75	321	1640.750	40	16472.100	410	85.83	73.08	
11	Total (HDPE + Hume pipe)	43668.500	1434	36775.500	1121	2057.450	50	39997.350	1228	91.59	85.63	

SN	Description	Unit	Total Up to Previous Month	This Month	Total Up to this Month	Remarks
1	Sewer Inlet	Nos.	1556.00	100	1656.00	
2	House Connection	Nos.	686.00	100	786.00	

C. Road improvement Works (Work Progress till the date)

SN	Description	Unit	Total Up to Previous Month	This Month	Total Up to this Month	Remarks
1	Asphalt pavement in R2 Road with access road	Rm	3201.00	0	3201.00	
2	Gravel road	Rm	11510.7	5715	17225.7	

D. Wastewater Treatment Plant Sub-Project (Work Progress till the date)**Physical progress till March 2017**

S.N.	Description	As per VO-3 Quantity (Nos,m.)	Progress		Update work	% work	Remarks
			Upto Previous Month	This month			
1	Anaerobic Pond	3	3	0	3	100	Rip-rap stone masonry work under progress
2	Facultative Pond	3	2.51	0.01	2.52	84	Rip-rap stone masonry work under progress
3	River Training Work	600	600	0	600	100	
4	Boundary Wall	1330	1283	0	1283	96.47	
5	Office cum Lab Building	1	1	0	1	100	
6	Workshop Building	1	1	0	1	100	
7	Generator/Changing House	1	1	0	1	100	

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8	Sump well	1	0.5	0.1	0.6	60	Upto 8.00 m. height R.C.C. work complete, Remaining work progress
9	Sludge Drying Bed	1	0.8	0.05	0.85	85	Brick masonry work complete, pipe, sand and Gravel packing work under progress
10	Road Side Drain	2880	1346.1	60	1406.1	48.82	
11	Guard House	1	0.2	0.5	0.7	70.00	

E. Production of Precast Items from Slab Casting Contractor's Yard, Katahari

SN	Description	Unit	Total Up to Previous Month	This Month	Total Up to this Month	Remarks
1	Slab	Rm	108763	7500	116263	
2	Precuts	Rm	11209	0	11209	
3	Kerbstone	Rm	23135		23135	
4	Manhole	Nos	2200	0	2200	
5	Sewer inlet	Nos	2224	0	2524	
6	House chamber	Nos	1546	450	1996	

F. Hume Pipe Production from Hume Pipe Production Factory, Itahari

SN	1	2	3	4	5	6	7	8	9	10	11
Diameter	200mm ?	300mm ?	350mm ?	400mm ?	450mm ?	500mm ?	600mm ?	700mm ?	900mm ?	1000mm ?	1600mm ?
No of Moulds	38	3	2	2	2	3	8	8	2	4	2
Production Till Previous Month	2123	328	216	370	84	551	963	1296	278	1011	373
This Month Production	0	0	0	60	0	0	0	0	0	0	0
Total Production	2123	328	216	430	84	551	963	1296	278	1011	373

H. Next month program

1. Road side drain.
2. Laying of sub base with proper compaction in roads
3. Precast production at contractor's yard.
4. Laying of sewerage pipe and installation of manhole, sewer inlet, house chamber
5. Relocation of water supply pipe and laying of newly water supply pipe line
6. Construction work of components of waste water treatment plant

6. Financial Progress and Cash Flow

Financial Progress

Installment Number	Total Bill Amount With Vat and PS(NRs)	Net Payable Amount (NRs.)	%	Remarks
IPC 01		200,940,000.00		Advance Payment 01
IPC 02	29,553,479.92	27,853,500.98		IPC 2
IPC 03	50,406,775.75	47,507,270.95		IPC 3
IPC 04	44,819,505.68	42,241,392.52		IPC 04
IPC 05	23,380,168.96	22,035,291.99		IPC 05
IPC 06	90,796,339.68	85,573,541.38		IPC 06
IPC 07	80,854,600.52	76,203,672.17		IPC 07
IPC 08	122,334,488.86	115,297,549.23		IPC 08
IPC 09	116,092,187.14	109,414,317.97		IPC 09
IPC 10	132,327,417.89	124,715,663.77		IPC 10
IPC 11	169,853,829.07	160,083,476.07		IPC 11
IPC 12	23,121,515.46	16,931,906.24		IPC 12
IPC 13	85,563,926.44	62,658,539.06		IPC 13
IPC 14	163,562,505.71	119,776,967.67		IPC 14
IPC 15	139,008,112.96	101,795,764.14		IPC 15
IPC 16	137,640,413.95	100,794,196.94		IPC 16
IPC 17	135,118,714.02	98,947,553.85		IPC 17
IPC 18	39,288,088.98	28,770,702.32		IPC 18
IPC 19	76081596.87	55,714,620.72		IPC 19
IPC 20	74,522,638.96	54,572,994.46		IPC 20
IPC 21	152,577,081.94	118,075,775.83		IPC 21
IPC 22	140,477,295.40	132,396,742.98		IPC 22
IPC 23	66,139,814.38	62,335,311.79		IPC 23
IPC 24	114760054.60	108158812.53		IPC 24
Total amount of Ipc=	2,208,280,553.14	2,072,795,565.56	74.69%	Progress Percentage WRT Contract amount after VO .03 With Vat and PS

Physical Progress

Installment Number	Total Bill Amount With Vat and PS(NRs)	Net Payable Amount (NRs.)	%	Remarks
IPC 01		200,940,000.00		Advance Payment 01
IPC 02	29,553,479.92	27,853,500.98		IPC 2
IPC 03	50,406,775.75	47,507,270.95		IPC 3
IPC 04	44,819,505.68	42,241,392.52		IPC 04
IPC 05	23,380,168.96	22,035,291.99		IPC 05
IPC 06	90,796,339.68	85,573,541.38		IPC 06
IPC 07	80,854,600.52	76,203,672.17		IPC 07
IPC 08	122,334,488.86	115,297,549.23		IPC 08
IPC 09	116,092,187.14	109,414,317.97		IPC 09
IPC 10	132,327,417.89	124,715,663.77		IPC 10
IPC 11	169,853,829.07	160,083,476.07		IPC 11
IPC 12	23,121,515.46	16,931,906.24		IPC 12
IPC 13	85,563,926.44	62,658,539.06		IPC 13
IPC 14	163,562,505.71	119,776,967.67		IPC 14
IPC 15	139,008,112.96	101,795,764.14		IPC 15
IPC 16	137,640,413.95	100,794,196.94		IPC 16
IPC 17	135,118,714.02	98,947,553.85		IPC 17
IPC 18	39,288,088.98	28,770,702.32		IPC 18
IPC 19	76081596.87	55,714,620.72		IPC 19
IPC 20	74,522,638.96	54,572,994.46		IPC 20
IPC 21	152,577,081.94	118,075,775.83		IPC 21
IPC 22	140,477,295.40	132,396,742.98		IPC 22
IPC 23	66,139,814.38	62,335,311.79		IPC 23
IPC 24	114760054.60	108158812.53		IPC 24
April 2017	100000000			
Total amount of Ipc=	2,308,280,553.14	2,072,795,565.56	78.08%	Progress Percentage WRT Contract amount after VO .03 With Vat and PS

7. Details of Safeguard activities

Contractor's is fascinating to apply safety measure at site during construction phase. Safety board, Diversion board, safety barriers, personnel's protection equipment to worker, spraying of water to minimize dust pollution

8. Key Issues and Remarks

Following issues were raised in this month

- Unseasonal Rainfall hampered daily work site activities.
- Submitted Claim No.01 to 07 has not addressed up to this month.
- Difficult to maintain cash flow due to withheld of payment of IPC -23till end of this month.

9. Mobilized Resource

A. Details of Contractor's Personnel at Site

SN	Contractor's Personnel's	Position
1	Ujjwal Prasai	Project Manager
2	Mahesh Subedi	Engineer
3	Bishesh Prasai	Engineer
4	Bimlesh kr. Yadav	Engineer
5	Suman Niroula	Engineer
6	Santosh Yadav	Engineer
7	Sanjay Bhattarai	Engineer
8	Gaurav Bikram Shah	Engineer
9	Ankit Dahal	Engineer
10	Bhupendra Yadav	Engineer
11	Aryogya Gyawali	Engineer
12	Pradip Kumar Mandal	Engineer
13	Randhir Kumar Singh	Engineer
14	Narayan Rijal	Sr. Supervisor
15	Uttar Karki	Supervisor
16	Yog Raj Kafle	Supervisor
17	Prasasan Rajbansi	Supervisor
18	Hari Shrestha	Supervisor
19	Saroj Adhikari	Overseer

20	Suraj Chaudahary	Overseer
21	Sanjay Shrestha	Overseer
22	Mukesh Kumar Gachhadar	Overseer
23	Bibekananda Yadav[Nikhil]	Overseer
24	Prakash Bhattarai	Sub Overseer
25	Sandesh Sunam	Sub Overseer
26	Rohit Kumar Yadav	Computer operator
27	Pritam Sunrait	Sub Overseer
28	Vishwa Bandhu Mainali	Finance Officer
29	YagyaKafle	Junior Accountant
30	IndramaniBhattarai	Sr. Marketing
31	Anil Pokharel	Store Keeper/Material In-charge
32	Sunil Chaudhary	Quality Control Manager
33	Shanker Chaudhary	Lab Technician
34	DipeshDahal	Lab Assistant
35	Rabin Pandit	Lab Assistant
36	Mahesh Pandit	Store Keeper
37	SarojBhattarai	Store Keeper
38	SaileshPaudel	Store Keeper
39	DipendraKarki	Store Assistant
40	Rabin BdrGurung	Store Keeper
41	Dhurba Raj Bhattarai	Store Keeper
42	Nil Prasad Neupane	Store Keeper
43	Ananda Rajbansi	Electrician
44	Ajay Chaudhary	Welder
45	Mechanics	4
46	Plumber	6
47	Light Vehicle Driver	4
48	Tipper Driver	4
49	Water Tanker Driver	5
50	Tractor Driver	15
51	Heavy Equipment operator	32
52	Helper	41
53	Cook (Casting yard and Jatuwa)	8
54	Security Guard (casting yard and Jatuwa)	4
57	Skilled Labor	340
58	UnskilledLabor	490

B. Details of Equipment at Site / Contractor's yard

SN	Equipment	Capacity	Nos
A.1	<u>Excavators</u>		
	Komatsu PC200 "A"	148HP /0.97m3	1
	Komatsu PC 200 "B" (longboom)	148HP /0.97m3	1
	Hundai PC 200 "C"	148HP /0.97m3	1
	Cat Excavator 320DL "A"	148HP /0.97m3	1
	JCB Excavator-140	148HP /0.97m4	3
	Komatsu PC 120		1
	JCB Excavator-220LC		3
A.3	<u>Back Hoe Loader</u>	92HP/0.30m3	13
A.4	<u>Grader</u>		
	Komatsu GD405A-2	115HP	1
	Komatsu GD405A-3	115HP	1
A.5	<u>Jeep/Pickup</u>		
	Pajero-Na2Cha 1086	5 door	1
	Tata Sumo Gold-Ba11Cha 782	5 door	2
	Pickup - Ko1Cha 2544	4 door	1
A.6	<u>Water Browser</u>		
	Water Tanker Na1Kha 8549	Up to 12KL	1
	Water Tanker Ko1Kha 3465	Up to 12KL	1
	Water Tanker Na1Kha 2595	Up to 12KL	1
	Water Tanker Me1Kha 275	Up to 12KL	1
	Water Tank (Joined with Tractor)	10KI	1
A.7	<u>Motorbikes</u>		
	Shine Bike Ko 17 Pa-3394	125cc	1
	Shine Bike Ko 17 Pa-3395	125cc	1
	Shine Bike Ko 20 Pa-215	125cc	1
	Shine Bike Ko 20 Pa-230	125cc	1
	Shine Bike Ko 20 Pa-1155	125cc	1
	Shine Bike Ko 20 Pa-1167	125cc	1

	Shine Bike Ko 11 Pa-8157	125cc	1
	Honda Shine Ve 1 Pa 8845	125cc	1
	Glamor (Ko 24 3802	100 cc	1
	Glamor (Ko 24 3804)	100 cc	1
A.8	<u>Tractors</u>		
	Tractor Ko 1Ta 5868	85HP/ Hydraulic	1
	Tractor Na 3 7936	85HP/ Hydraulic	1
	Tractor Ko1Ta 1127	85HP/ Hydraulic	1
	Tractor Ko 2 Ta 1755	85HP/ Hydraulic	1
	Tractor Ko1Ta 4579	85HP/ Hydraulic	1
	Tractor Ko1Ta 4546	85HP/ Hydraulic	1
	Tractor Na1Ta 1119	85HP/ Hydraulic	1
	Tractor Ko1Ta 4145	85HP/ Hydraulic	1
	Tractor Ko1Ta 6204	85HP/ Hydraulic	1
	Tractor Ko1Ta 1730	85HP/ Hydraulic	1
	Tractor Ko1Ta 3430	85HP/ Hydraulic	1
	Tractor Ko1Ta 4045	85HP/ Hydraulic	1
	Tractor Ko1Ta 2244	85HP/Hydraulic	1
	Tractor Ko1Ta 1856	85HP/ Hydraulic	1
	Tractor Ko1Ta 8882	85HP/ Hydraulic	1
	Tractor sa 1Ta 2073	85HP/Hydraulic	1
A.9	<u>Roller & Compactor</u>		
	JCB Vibromax	Upto 16Ton	1
	Case Compactor 450 DX	Upto 5Ton	1
	Single Drum Hand Roller [Honda GX160]	4Kw	1
	Monkey Jumpur[Honda GX 160]	6.5Ps/10000N	3
	Plate Compactor		3
	Hydraulic Compactor		1
A.10	<u>Tipper Truck</u>		
	AMW Tipper-Na1Ka 3489	150HP/10m3	1
	AMW Tipper-Na1Ka 3494	150HP/10m3	1
	AMW Tipper-Na1Ka 3491	150HP/10m3	1

	AMW Tipper-Na1Ka 3493	150HP/10m3	1
B	<u>Bitumunious Plant/Crane & Others</u>		
	Asphalt Hot Mix Plant Set -Keshar DM45	40 to 60 Ton/Hr	1
	Asphalt Paver Machine-Na1Ka 3135	105HP	1
	Bitumen Distributor-Ba1Ka 3443		1
	Decanter		1
	Teller Lobed -Na3Kha 7382		1
	Mobile Unique Crane with Teller Ba1Ka 4423	10Ton	1
	Compressor		1
	JCB Hydra Lift all	15Ton	1
C	<u>Concreting Unit</u>		
	Manual Mixture Machine[Everest]		2
	Manual Mixture Machine [Ashoka]		2
	Hydraulic Mixture Machine[Universal]		4
	Hydraulic Mixture Machine[Kirloskar]		6
	Bar Bending Machine Set	4Ton/Hrs	3
	Bar Cutter Machine Set	4Ton/Hrs	3
	Concrete Vibrator with Needle	Diesel/3PHs/Pneumatic	14
D	<u>Work Shop Equipment and Tools</u>		
	Generator-Kirloskar/Jackson	20Kva	2
	Generator [Kirloskar]	125Kva	1
	Generator	62.5Kva	1
	Generator[Honda]	2.5Kva	2
	Generator[Super]	5KVA	3
	Generator[Lutian] [LT3600]	2.5KVA	1
	Welding Machine Set	4Ton/Hrs	8
	Concrete Cutter		1
	Kerb Stone Machine Set	41+00	
	Mechanical Jack		10
	Submersible Pump		15
	Pump Set		5

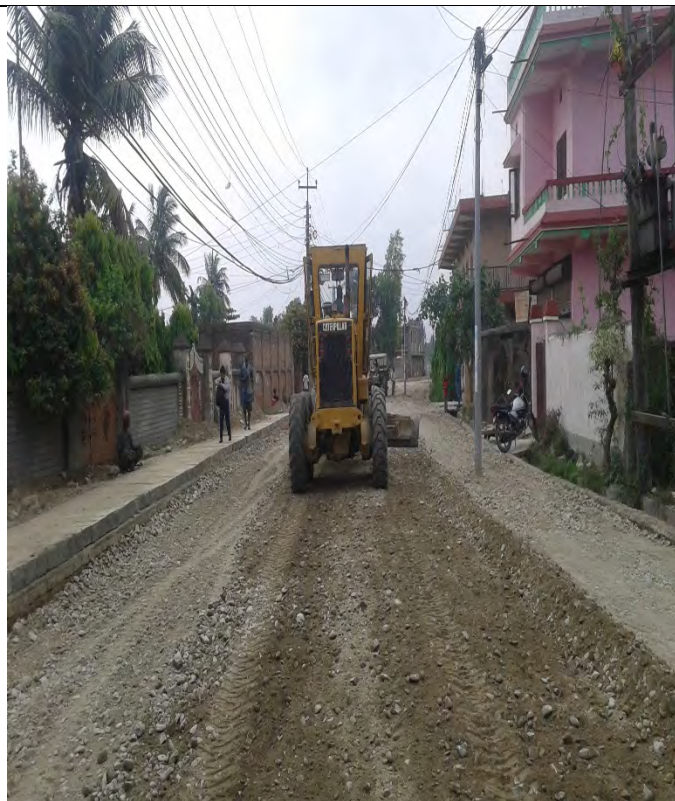
E	<u>Survey Equipment</u>	-	
	Total Station		2
	Level Machine		15
F	Lab Equipment		1 Set
		-	

10. Conclusion

Due to delay in payment of IPC amount and unseasonal heavy rainfall, the work progress is quite slow in this month. This lagging progress will be in progress in next month by increasing resources.

ANNEX

Photographs of the Month



Sub base laying and finishing works at Road



Backfilling work in road side drain under progress



Demonstration of Jet spray to clean Drain



Concreting of bottom Plug



Hume Pipe laying at Koshi Highway (Trunk line)



Using Breaker to Dismantle Box Culvert at T1 Trunc



Backfilling Work in Highway T1 Trunc



Maintainence of Drinking Water Pipe in T1 Trunc

LAB REPORT SUMMARY

SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
BIRATNAGAR Sub-Metropolitan City
Monthly Laboratory Testing Report
(For The Month OF-APRIL 2017)

STIUEIP

Consultants: SMEC-Brisbane-AQUA-CEMAT-BDA

Contractors: CTCE- KALIKA J/V

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
1	Granular Material/Gravel material	Sieve analysis	90	0	0	0		90	
2	SUB GRADE Preparation as per Specification	MDD & OMC	53	20	20	0		73	
		Field density	535	88	87	1		623	
		C.B.R	53	20	20	0		73	
3	BRICK WORK Required Test	Water Absorption	195	0	0	0		195	
		Compressive Strength	2901	0	0	0		2901	
4	Masonry Mortar (CM 7.05)	Compressive strength	4341	80	80	0		4421	
5	CONCRETE AGGREGATE Coarse aggregate (20 mm)	Sieve analysis (20 mm)	356	0	0	0		356	
		LAA	269	0	0	0		269	
		Specific Gravity	16	0	0	0		16	
		FI	258	0	0	0		258	
		ACV	306	0	0	0		306	
		Fine aggregate (Sand)	Sieve analysis	365	0	0		365	
6	CONCRETE MIX DESIGN Concrete M15/20, M20/20 M25/20, & M30/20	Concrete mix Design	76	1	1	0		77	
		Compressive strength	456	6	6	0		462	
		Slump test	73	2	2	0		75	

[Signature]



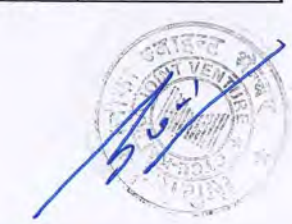
SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
BIRATNAGAR Sub-Metropolitan City
Monthly Laboratory Testing Report
(For The Month OF-APRIL 2017)

Consultants: SMEC-Brisbane-AQUA-CEMAT-BDA

Contractors: CTCE- KALIKA J/V

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
7	<u>CEMENT Required Test</u>								
8	<u>OPC Cement</u>	Setting time	289	30	30	0		319	
		Normal Consistency	289	30	30	0		319	
	<u>CONCRETE</u>								
		Work Mix Test M15,M20,M25,M30	Compressive strength	12207	390	390	0	12597	
9	<u>REINFORCEMENT</u>	Required Test							
	Reinforcement tore steel	As per Specifacation	80	0	0	0		80	
10	<u>PAVEMENT MATERIALS</u>								
	Sub Base Materials	Sieve analysis	176	30	30	0		206	
		MDD & OMC	29	12	12	0		41	
		CBR	25	12	12	0		37	
		Field density	328	64	64	0		392	
11	CS Base	Sieve analysis	110	0	0	0		110	
	Crushed Stone Base	MDD & OMC	20	0	0	0		20	
	Material Laying	C.B.R	18	0	0	0		18	
		FI & C.Ratio	110	0	0	0		110	
		LAA	111	0	0	0		111	
		SSS	53	0	0	0		53	
		AIV	110	0	0	0		110	
		Field Density & OMC	179	0	0	0		179	

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SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
BIRATNAGAR Sub-Metropolitan City
Monthly Laboratory Testing Report
(For The Month OF-APRIL 2017)

Consultants: SMEC-Brisbane-AQUA-CEMAT-BDA

Contractors: CTCE- KALIKA J/V

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
12	<u>ASHPHALT CONCRETE</u> Combine Mixed Individual Ca&FA Test Mix Design	Sieve analysis	39	0	0	0		39	
		FI	24	0	0	0		24	
		ACV	24	0	0	0		24	
		LAA	24	0	0	0		24	
		Sp gravity	4	0	0	0		4	
13	<u>BITUMEN TEST</u> 80/100 Bitumen As per DORbook section 600 Table 6.14/is 73	Penetration at25.c	2	0	0	0		2	
		Softening point(ring ball)	2	0	0	0		2	
		Flash point/Fire Point	2	0	0	0		2	
		Ductility at25.c	2	0	0	0		2	
		Specific at 25.c	2	0	0	0		2	
		Water Content	2	0	0	0		2	
		Loss on Heating for 5 hrs	2	0	0	0		2	
		Pen-of residue afte loss on Heating	2	0	0	0		2	
		Solubility in trichloroethylene	2	0	0	0		2	
14	Humpipe Test	Three Edge Bearing Load Test	7	0	0	0		7	200mm to 1600mm 1 each
15	MARSHALL MIX DESIGN	WEARING COURSE	1	0	0	0		1	
16	Marshall Stability Test	Bulk density	102	0	0	0		102	
		Stability	102	0	0	0		102	
		Flow	102	0	0	0		102	
		Air voides	102	0	0	0		102	

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SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
BIRATNAGAR Sub-Metropolitan City
Monthly Laboratory Testing Report
(For The Month OF-APRIL 2017)

Consultants: SMEC-Brisbane-AQUA-CEMAT-BDA

Contractors: CTCE- KALIKA J/V

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
		Bitumen extraction	36	0	0	0		36	
		Voids in Mineral Agg	102	0	0	0		102	
		Job mix in AC Plant	64	0	0	0		64	
17	<u>BITUMEN SPREAD TEST</u>								
	Prime coat	Application rate	20	28	28	0		48	
	Tack coat	Application rate	10	28	28	0		38	
18	<u>Machines/Equipment</u>								
	Caliberation of compressive	1000KN Manuall	3	0	0	0		2	
	Testing machine	500 KN Manuall	3	0	0	0		2	
	C.B.R Machine	50KN/30KN	2	0	0	0		2	
	Marshall Stability Machine	50KN/25KN	2	0	0	0		2	
19	<u>MISCELLANEOUS</u>								
	G.I Wire(Gabion Boxes)		5	0	0	0		5	
	Factory Test Report of Cement		8	0	0	0		8	
	Factory Test Report of Iron Steel		4	21	21	0		4	
	Factory Test Report of 80/100 Bitumen		2	0	0	0		2	
	Factory Test Report of UPVC/HDP Pipe		2	0	0	0		2	
	UPVC/HDP Pipe Test Result		2	0	0	0		2	
MDD/OMC = Max Dry Dennsity Optimum Moisture Content SSS = Sodium Sulphate Soundness ACV = Aggregtae Crushing Value CBR=California Bearing Ratio		LAA = Los Angeles Abrasion SE=Sand Equivqlent SMEC-Brisbane-AQUA-BDA-CEMAT Approved by C.S.E Checked by A.C.S.E Consultant Reps		AIV=Aggregate Impact Value JMC=Job Mix Formula		C.R=Crushing Ratio			
				CTCE-KALIKA J/V Submitted by Project Manager Prepaid by Q.C Manager Contractors Reps					

SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City

STIUEIP

MONTHLY Test Result Summary Sheet For The Month of APRIL 2017

SUB BASE (Process Control)

According to Part 2. Section 6A-Technical Specifications & DOR Specification Section 1201(3)C Physical Requirement

P.G-1

SN No	LAB Ref NO	Date Tested	Location/ Chainage/Station	Grading sieve size (mm)								Lab. MDD (g/cc)	Soaked CBR (%)	Lab. OMC (%)	Remarks
				(% passing by weight)											
				63	37.5	20	10	5	2.360	1.18	0.075				
1	196	1/4/2017	OM SHREE CRUSHER PLANT	100	90.21	73.72	58.27	43.99	32.29	21.86	6.77	2.220	40.00	9.50	
2	197	1/4/2017	OM SHREE CRUSHER PLANT	100	92.57	73.39	58.09	44.46	33.42	20.99	7.03				
3	198	1/4/2017	OM SHREE CRUSHER PLANT	100	90.21	71.90	56.30	43.28	31.61	19.84	5.46				
4	199	2/4/2017	R-21 Line Ch:1+160 to 1+310	100	89.92	72.04	56.39	43.79	31.64	19.93	6.11	2.220	44.00	9.50	
5	200	2/4/2017	R-21 Line Ch:1+160 to 1+310	100	86.29	70.06	57.34	46.32	34.91	21.96	6.82				
6	201	13/4/2017	R-37 Line Ch:0+000 to 0+194	100	84.48	67.97	54.49	42.47	32.06	20.20	6.18	2.220	46.00	9.50	
7	202	13/4/2017	R-37 Line Ch:0+000 to 0+194	100	84.91	69.10	55.52	43.79	33.29	20.57	6.70				
8	203	13/4/2017	R-37 Line Ch:0+000 to 0+194	100	84.76	68.23	54.59	42.51	31.75	20.24	6.27				
9	204	13/4/2017	R-37 Line Ch:0+000 to 0+194	100	85.96	70.29	56.26	43.59	32.11	20.16	6.42				
10	205	14/4/2017	R-21 Lin	100	89.29	72.28	55.96	39.22	30.87	22.59	6.27	2.220	45.00	9.50	
11	206	14/4/2017	R-21 Lin	100	90.36	70.44	54.18	36.49	27.79	21.65	5.70				
12	207	14/4/2017	R-21 Lin	100	89.49	71.10	55.67	37.93	30.90	24.33	7.26				
13	208	14/4/2017	R-21 Lin	100	89.62	68.01	54.47	35.70	28.50	20.96	5.94				
14	209	14/4/2017	WWTP ROAD	100	85.34	70.68	58.91	42.90	31.08	24.14	5.25	2.220	46.00	9.50	
15	210	14/4/2017	WWTP ROAD	100	89.22	74.35	60.49	44.76	32.52	21.94	11.70				
				100	65-95	50-85	40-75	30-60	20-45	15-37	4 to 15		≥ 30		

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submit by Project Manager

Test Conducted by Q.C Manager

Consultant Reps



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City
MONTHLY Test Result Summary Sheet For The Month of APRIL 2017

STIUEIP

SUB BASE (Process Control)

According to Part 2. Section 6A-Technical Specifications & DOR Specification Section 1201(3)C Physical Requirement

P.G-2

SN No	LAB Ref NO	Date Tested	Location/ Chainage/Station	Grading sieve size (mm)								Lab. MDD (g/cc)	Soaked CBR (%)	Lab. OMC (%)	Remarks
				(% passing by weight)											
				63	37.5	20	10	5	2.360	1.18	0.075				
16	211	14/4/2017	WWTP ROAD	100	88.71	73.03	60.44	43.85	30.92	19.23	6.41				
17	212	14/4/2017	WWTP ROAD	100	88.59	72.39	59.29	44.90	31.61	22.67	6.06				
18	213	14/4/2017	WWTP ROAD	100	87.88	71.20	56.36	43.42	31.74	24.07	6.72				
19	214	14/4/2017	WWTP ROAD	100	88.79	76.21	56.55	42.77	29.95	20.01	6.41				
20	215	14/4/2017	WWTP ROAD	100	97.89	71.03	56.60	43.76	32.23	23.13	6.63				
21	216	15/4/2017	R-114 Panchali Marg	100	88.01	72.43	57.43	44.64	32.83	23.39	7.15	2.220	44.00	9.50	
22	217	15/4/2017	R-114 Panchali Marg	100	91.08	71.78	57.90	45.70	32.28	22.96	6.61				
23	218	15/4/2017	R-114 Panchali Marg	100	91.36	73.93	59.12	45.92	32.31	22.35	6.82				
24	219	15/4/2017	R-114 Panchali Marg	100	90.95	74.22	59.09	45.59	31.31	20.45	6.65	2.220	48.00	9.50	
25	220	15/4/2017	R-114 Panchali Marg	100	91.87	75.94	60.94	47.37	31.61	20.30	6.88				
26	221	16/4/2017	R-25 Devi Marg	100	89.02	73.93	57.20	42.20	30.90	19.95	6.33	2.220	44.00	9.50	
27	222	18/4/2017	T1L16A,B,C	100	87.54	70.80	59.90	46.68	35.71	22.13	5.61	2.220	38.00	9.50	
28	223	20/4/2017	R-4 0+970 to 1+320	100	91.11	74.11	59.44	46.69	33.46	22.62	6.56	2.220	36.00	9.50	
29	224	22/4/2017	R-10 Line 0+840 to 0+620	100	92.08	71.43	57.50	44.64	31.49	23.57	6.50	2.220	38.00	9.50	
30	225	24/4/2017	R-5 College Road	100	87.32	68.75	53.75	40.70	31.25	24.81	6.60	2.220	42.00	9.50	
				100	65-95	50-85	40-75	30-60	20-45	15-37	4 to 15		≥ 30		

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

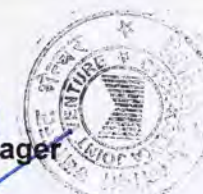


CTCE-KALIKA J/V

Submit by Project Manager

Test Conducted by Q.C Manager

Consultant Reps



Secondary Town Integrated Urban Environmental Improvement Project

Biratnagar Sub-Metropolitan city

Contract Package: STIUEIP/W/BRT/ICB-01

DAILY WEATHER RECORD

FOR THE MONTH OF APRIL 2017

Date	WEATHER Record						Temp.c		
	Sunny	Foggy	Cloudy	Morning Rain HRS	Night Rain Hrs.	Day Rain Hrs.	9:00 AM	5:00 PM	Rain Fall MM
1	Sunny						23.5	21	
2	Sunny						24	20.6	
3	Sunny						23.8	21.2	
4	Sunny						24.2	20.8	
5	Sunny						23.2	20	
6	Sunny						24.6	22.2	
7	Sunny						25.6	22.6	
8	Sunny						25.4	20.2	
9	Sunny						23.2	19.6	
10	Sunny						24.4	22.2	
11	Sunny						23.4	21	
12	Sunny						23.6	20.2	
13	Sunny						24.2	20.2	
14	Sunny						26	24.2	
15	Sunny		Cloudy	Morning Rain HRS			25.1	22.2	35
16	Sunny						25.7	24.2	
17	Sunny						24.8	23.6	
18	Sunny						24.6	24.2	
19	Sunny						27.1	26.2	
20	Sunny			Morning Rain HRS			24.6	22.6	60
21	Sunny						26	20.6	
22	Sunny			Morning Rain HRS			26.2	24.4	40
23	Sunny						26.4	23.6	
24	Sunny						26.9	24.6	
25	Sunny						27.4	26.2	
26	Sunny						28.4	24.6	
27	Sunny						27.9	26.2	
28	Sunny						26.8	24.6	
29	Sunny					Day Rain Hrs.	27.4	24.6	30
30	Sunny						28.2	26.2	

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved By C.S.E

Record Checked By A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submitted By Project Manager

Record Reported By Q.C Manager

Contractor Reps



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitan City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)
FOR THE MONTH OF APRIL 2017

Description : Field Density Tests on

FDT -74: R-3 Line 5+660 to 5+830 Dharam badh Road

FDT-75: T3L25B & T3L25 C Line

FDT-76 : R-8, T3L25A Bhagwati Marg Madhu Mara Road

FDT-77 :WWTP Out Side Boundary Wall Road 0+000 to 0+650

SUB GRADE

P.G-1

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT 74	1/4/2017	5+700 LHS	1.95	98.48	8.0	15.0
2			5+750 RHS	1.93	97.47	6.0	15.0
3			5+800 CL	1.9	96.96	7.0	15.0
4			5+830 LHS	1.89	95.45	6.0	15.0
1	FDT 75	6/4/2017	1+150 CL	1.90	96.17	6.0	15.0
2			1+100 LHS	1.95	98.26	6.0	15.0
3			1+020 RHS	1.94	98.11	7.0	15.0
1			0+020 CL	1.92	97.11	6.0	15.0
2			0+040 LHS	1.89	95.40	8.0	15.0
1	FDT 76	10/4/2017	0+100 CL	1.94	97.98	2.00	15.0
2			0+050 RHS	1.93	97.48	4.00	15.0
3			0+020 LHS	1.89	95.45	2.00	15.0
1	FDT 77	14/4/2017	0+030 LHS	1.93	97.47	2.00	15.0
2			0+080 RHS	1.92	96.97	4.00	15.0
3			0+130 CL	1.95	98.48	4.00	15.0
4			0+180 LHS	1.94	98.98	3.00	15.0
5			0+230 RHS	1.90	95.96	4.00	15.0
6			0+300 CL	1.93	97.47	4.00	15.0
7			0+380 LHS	1.94	97.98	4.00	15.0
8			0+460 RHS	1.91	96.46	4.00	15.0
9			0+540 CL	1.94	97.98	4.00	15.0
10			0+600 LHS	1.95	98.48	4.00	15.0
11			0+620 RHS	1.91	96.46	3.00	15.0
12			0+640 CL	1.90	95.96	3.00	15
Required				1.980	95%	OMC <9.00	
SMEC-Brisbane -AQUA-CEMAT-BDA Approved by C.S.E Test Checked by A.C.S.E Consultant Reps				CTCE-KALIKA J/V Submitted by Project Manager Test Conducted by Q.C Manager Contractors Reps			



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitan City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)
FOR THE MONTH OF APRIL 2017

Description : Field Density Tests on

FDT -78 : R21 Line 0+750 to 1+120

FDT-79: R26/ T2L19 C Line 0+000 to 0+305

FDT-80 : R-21 Bhumi Prashan Chowck 0+000 to 0+200

FDT-81: R-25 Line Devi Marg 0+150 to 0+230

FDT-82: T1L16 C 0+000 to 0+170

FDT-83: T1L16 A 0+000 to 0+140

SUB GRADE

P.G-2

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT 78	15/4/2017	0+800 CL	1.94	97.98	4.0	15.0
2			0+850 LHS	1.96	98.99	3.0	15.0
3			0+910 RHS	1.90	95.96	3.0	15.0
4			0+990 LHS	1.92	96.97	4.0	15.0
5			1+020 RHS	1.92	96.97	3.0	15.0
6			1+080 CL	1.92	96.97	4.0	15.0
1	FDT 79	21/4/2017	0+025 LHS	1.91	96.46	7.0	15.0
2			0+080 RHS	1.95	98.48	7.0	15.0
3			0+120 CL	1.89	95.45	4.0	15.0
4			0+170 LHS	1.93	97.47	4.0	15.0
5			0+230 RHS	1.94	97.98	4.0	15.0
6			0+290 RHS	1.95	98.48	5.0	15.0
1	FDT 80	21/4/2017	0+170 LHS	1.92	97.21	7.00	15.0
2			0+090 RHS	1.94	98.03	8.00	15.0
3			0+030 CL	1.90	95.82	7.00	15.0
1	FDT 81	21/4/2017	0+160 LHS	1.92	97.09	7.00	15.0
2			0+220 RHS	1.89	95.38	7.00	15.0
1	FDT 82	21/4/2017	0+010 LHS	1.93	97.45	3.00	15.0
2			0+060 RHS	1.92	97.16	5.00	15.0
3			0+120 CL	1.94	98.20	7.00	15.0
4			0+160 LHS	1.91	96.30	4.00	15.0
1	FDT83	21/4/2017	0+010 LHS	1.92	97.08	7.00	15.0
2			0+060 RHS	1.92	97.21	7.00	15.0
3			0+120 CL	1.91	96.61	7.00	15.0

Required

1.980

95%

OMC <9.00

SMEC-Brisbane -AQUA-CEMAT-BDA
 Approved by C.S.E
 Test Checked by A.C.S.E
 Consultant Reps

CTCE-KALIKA J/V
 Submitted by Project Manager
 Test Conducted by Q.C Manager
 Contractors Reps



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT							
Biratnagar Sub-Metropolitan City							
SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)							
FOR THE MONTH OF APRIL 2017							
Description : Field Density Tests on							
FDT -84: T1L16 B Line 0+000 to 0+204							
FDT-85 : R21 Line 0+170 to 0+390 Bhumi Prashan Chowck							
FDT-86: R78 Line 0+000 to 0+093							
FDT-87: R-10 Line 0+000 to 0+220							
FDT-88 : R76 Line 0+000 to 0+273							
FDT-89 : R-4 Line National Trading to Jatuwa Road 0+000 to 0+263							
SUB GRADE						P.G-3	
S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT 84	21/4/2017	0+025 LHS	2.08	96.3	6.0	15.0
2			0+085 CL	2.1	97.22	5.0	15.0
3			0+150 RHS	2.14	99.07	4.0	15.0
4			0+200 LHS	2.14	99.07	3.0	15.0
Required				2.160	95%	OMC <7.0	
1	FDT 85	22/4/2017	0+190 LHS	1.94	97.98	8.0	15.0
2			0+240 RHS	1.91	96.46	7.0	15.0
3			0+300 CL	1.91	96.46	7.0	15.0
4			0+350 LHS	1.91	96.46	5.0	15.0
5			0+380 RHS	1.85	93.43	3.0	Re rolled
6			0+380 RHS	1.95	98.48	4.0	Re Tested
1	FDT 86	22/4/2017	0+020 LHS	1.89	95.45	6.00	15.0
2			0+090 RHs	1.90	95.96	5.00	15.0
1	FDT 87	25/4/2017	0+200 LHS	1.93	97.98	6.00	15.0
2			0+150 RHS	1.90	96.46	5.00	15.0
3			0+100 CL	1.91	96.46	6.00	15.0
4			0+030 RHS	1.93	97.98	6.00	15.0
1	FDT 88	27/4/2017	0+030 LHS	1.93	97.57	4.00	15.0
2			0+080 RHS	1.91	96.26	4.00	15.0
3			0+140 CL	1.94	97.87	4.00	15.0
4			0+210 LHS	1.95	98.24	4.00	15.0
5			0+240 RHS	1.95	98.23	4.00	15.0
6			0+270 LHS	1.93	97.57	3.00	15.0
1	FDT89	27/4/2017	0+250 RHS	1.96	98.79	7.00	15.0
2			0+200 LHS	1.93	97.70	6.00	15.0
3			0+150 RHS	1.97	99.57	7.00	15.0
4			0+100 CL	1.93	97.70	6.00	15.0
5			0+030 RHS	1.94	97.88	7.00	15.0
6			0+005 CL	1.94	97.88	4.00	15.0
Required				1.980	95%	OMC <9.00	
SMEC-Brisbane -AQUA-CEMAT-BDA				CTCE-KALIKA JV			
Approved by C.S.E				Submitted by Project Manager			
Test Checked by A.C.S.E				Test Conducted by Q.C Manager			
Consultant Reps				Contractors Reps			

SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City

**SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)
FOR THE MONTH OF APRIL 2017**

Description : Field Density Tests on

FDT -90 :R-29 Line East Side Shanti Marg 0+000 to 0+180

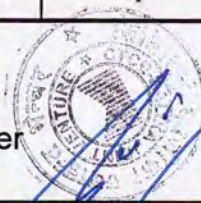
FDT-91 : R-9 Line 0+000 to 0+117

FDT-92 ;R-37 Line 0+280 to 0+469

SUB GRADE

P.G-4

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT 90	24/4/2017	0+160 RHS	1.96	98.84	5.0	15.0
2			0+110 LHS	1.91	96.46	5.0	15.0
3			0+060 RHS	1.91	96.46	4.0	15.0
4			0+020 LHS	1.92	96.97	5.0	15.0
1	FDT 91	29/4/2017	0+100 LHS	1.91	96.46	5.0	15.0
2			0+050 CL	1.92	96.97	5.0	15.0
3			0+010 RHS	1.91	96.46	5.0	15.0
Required				1.980	95%	OMC <9.00	
1	FDT 92	30/4/2017	0+290 CL	2.12	97.25	5.00	15.0
2			0+350 LHS	2.13	97.71	4.00	15.0
3			0+410 RHS	2.12	97.25	5.00	15.0
4			0+450 LHS	2.15	98.47	6.00	15.0
Required				2.180	95%	OMC <6.50	
SMEC-Brisbane -AQUA-CEMAT-BDA Approved by C.S.E Test Checked by A.C.S.E Consultant Reps				CTCE-KALIKA J/V Submitted by Project Manager Test Conducted by Q.C Manager Contractors Reps			



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)

SUB BASE LAYER

For The Month of APRIL 2017

FDT-56: R-4 Road National Trading to Jatuwa Road 0+970 to 1+320

FDT-57: R-10 Line 0+840 to 0+620

FDT-58: R-5 College Road 2+000 to 2+240

FDT-59: R76 Line 0+000 to 0+273

S.N.	L/Ref. No.	Date	Location/ Area	MDD Gm/CC	Degree of Compaction, %		Remarks /Thickness
1	FDT-56	26/4/2017	1+000 LHS	2.11	95.03	4.00	15.0
2			1+005 CL	2.12	95.30	4.00	15.0
3			1+110 RHS	2.12	95.50	4.00	15.5
4			1+160 LHS	2.17	97.86	5.00	15.5
5			1+240 RHS	2.21	99.45	5.00	15.0
6			1+300 LHS	2.15	96.85	5.00	15.0
1	FDT-57	28/4/2017	0+840 RHS	2.2	99.10	7.00	16
2			0+765 LHS	2.20	99.10	6.00	15.0
3			0+700 RHS	2.16	97.08	5.00	15.0
4			0+680 LHS	2.14	96.40	6.00	15.0
5			0+650 RHS	2.20	99.10	5.00	15.0
6			0+620 LHS	2.20	99.10	6.00	15.0
1	FDT-58	29/4/2017	2+220 LHS	2.13	95.95	4.00	16.0
2			2+160 RHS	2.14	96.40	3.00	15.0
3			2+110 LHS	2.12	95.50	4.00	15.0
1	FDT-59	29/4/2017	0+040 LHS	2.19	98.65	4.00	15.0
2			0+090 RHS	2.21	99.55	6.00	15.0
3			0+160 LHS	2.18	98.20	6.00	14.5
4			0+210 RHS	2.13	95.95	6.00	15.0
5			0+265 CL	2.18	98.20	6.00	15.0
Required				2.220	95%	OMC <9.50	15 CM

SMEC-Brisbane -AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractors Reps



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)

SUB BASE LAYER

For The Month of APRIL 2017

FDT-51 :R-25 Line Devi Marg 0+150 to 0+230

FDT-52: R26 Line /T2L19C 0+000 to 0+306

FDT-53 : T1L16 B Hotel Panchali Road 0+000 to 0+204

FDT-54: T1L16 C Line 0+000 to 0+170 Prasant Girl Hostel Road

FDT-55 : T1L16 A Line 0+000 to 0+140 Hotel Xenial Road

S.N.	L/Ref. No.	Date	Location/ Area	MDD Gm/CC	Degree of Compaction, %		Remarks /Thickness
1	FDT-51	25/4/2017	0+160 RHS	2.13	95.95	5.00	15.0
2			0+210 LHS	2.13	95.95	5.00	15.0
1	FDT-52	25/4/2017	0+030 LHS	2.19	98.67	8.00	15.5
2			0+090 RHS	2.15	96.99	7.00	15.0
3			0+160 CL	2.14	96.27	5.00	15.0
4			0+210 LHS	2.19	98.67	5.00	14.5
5			0+280 RHS	2.17	97.63	5.00	15.5
6			0+300 LHS	2.17	97.63	6.00	15.0
1	FDT-53	26/4/2017	0+200 RHS	2.21	99.39	7.00	14.5
2			0+110 LHS	2.12	95.44	4.00	15.0
3			0+050 CL	2.18	98.15	7.00	15.0
4			0+030 RHS	2.18	98.15	8.00	15.0
5			0+010 CL	2.19	98.87	8.00	15.5
1	FDT-54	26/4/2017	0+020 LHS	2.20	99.15	6.00	15.0
2			0+080 CL	2.18	98.37	8.00	15.0
3			0+140 RHS	2.19	98.67	6.00	15.0
1	FDT-55	24/4/2017	0+050 LHS	2.19	98.75	8.00	15
2			0+130 RHS	2.19	98.75	7.00	15
3			0+170 LHS	2.17	97.58	8.00	15.5
Required				2.220	95%	OMC <9.50	15 CM

SMEC-Brisbane -AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractors Reps



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitan City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28)

SUB BASE LAYER

For The Month of APRIL 2017

FDT-46: R-37 Line 0+000 to 0+194

FDT-47: R114 Panchali Road 0+00 to 0+300

FDT-48: WWTP INNER ROAD Sourthen & Western Line 0+00 to 0+185

FDT-49: R-21 Line 0+0750 to 1+100

FDT-50 :R21 Line 0+000 to 0+390 Bhumiprashan Chowck

S.N.	L/Ref. No.	Date	Location/ Area	MDD Gm/CC	Degree of Compaction, %		Remarks /Thickness
1	FDT-46	13/4/2017	0+035 LHS	2.21	99.64	8.00	14.0
2			0+090 RHS	2.21	99.64	4.00	15.0
3			0+110 LHS	2.21	99.64	4.00	16.0
4			0+140 CL	2.20	99.05	5.00	15.5
5			0+190 LHS	2.20	99.05	8.00	15.0
1	FDT-47	17/4/2017	0+300 LHS	2.21	99.55	5.00	14.5
2			0+280 LHS	2.17	97.75	6.00	15.5
3			0+200 RHS	2.18	98.20	5.00	15.0
4			0+150 CL	2.13	95.95	3.00	14.5
5			0+100 LHS	2.18	98.20	6.00	15.5
6			0+040 RHS	2.14	96.40	6.00	15.0
1	FDT-48	19/4/2017	0+185 LHS	2.20	99.09	2.00	16.0
2			0+135 RHS	2.19	98.65	4.00	12.5
3			0+080 CL	2.17	97.75	4.00	17.0
4			0+020 RHS	2.12	95.50	2.00	15.0
1	FDT-49	20/4/2017	0+850 CL	2.20	99.10	5.00	14.0
2			0+905 LHS	2.16	97.30	7.00	12.0
3			0+970 RHS	2.19	98.65	6.00	16.0
4			1+010 LHS	2.12	95.50	2.00	15.5
5			1+060 CL	2.21	99.55	7.00	17.0
1	FDT-50	24/4/2017	0+050 LHS	2.16	97.30	6.00	16
2			0+130 RHS	2.21	97.30	7.00	15.5
3			0+170 LHS	2.21	97.30	7.00	15
4			0+200 RHS	2.17	97.75	7.00	14.5
5			0+300 CL	2.14	96.40	7.00	15

Required

2.220

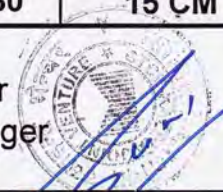
95%

OMC <9.50

15 CM

SMEC-Brisbane -AQUA-CEMAT-BDA
 Approved by C.S.E
 Test Checked by A.C.S.E
 Consultant Reps

CTCE-KALIKA J/V
 Submitted by Project Manager
 Test Conducted by Q.C Manager
 Contractors Reps



SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

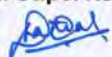
Biratnagar-Sub-Metropolitant City

SUMMARY OF MORTAR COMPRESSIVE STRENGTH TEST WORK MIX CUBE

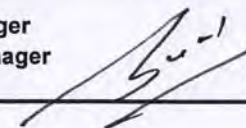
FOR THE MONTH OF APRIL 2017



P.G-1

S.N.	LAB REF No.	Name of CEMENT	Location/Structure	Details of MIX	Casting	Consistency & Setting Time			7 day's cube Crushing		28 day's cube crushing		Remarks
						Norm. Const.	Intial(min.)	Final(min.)	Date	Str. N/mm2	Date	Str. N/mm2	
1	743	KOSHI	WWTP	1:4 by volume	4/3/2017	36.70	190	305	11/3/2017	5.90	1/4/2017	7.80	
2	744	KOSHI	High way Man Hole	1:4 by volume	4/3/2017	36.70	190	305	11/3/2017	6.00	1/4/2017	7.90	
3	745	KOSHI	High way Man Hole	1:4 by volume	4/3/2017	36.70	190	305	11/3/2017	6.00	1/4/2017	7.90	
4	746	KOSHI	High way Man Hole	1:4 by volume	5/3/2017	36.60	205	285	12/3/2017	6.00	2/4/2017	8.00	
5	747	KOSHI	High way Man Hole	1:4 by volume	5/3/2017	36.60	205	285	12/3/2017	5.90	2/4/2017	8.00	
6	748	KOSHI	WWTP	1:4 by volume	6/3/2017	36.60	215	290	13/3/2017	5.70	3/4/2017	7.90	
7	749	KOSHI	High way Man Hole	1:4 by volume	6/3/2017	36.60	215	290	13/3/2017	5.90	3/4/2017	7.90	
8	750	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	6/3/2017	36.60	215	290	13/3/2017	6.40	3/4/2017	9.30	
9	751	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	18/3/2017	36.00	180	310	25/3/2017	6.50	15/4/2017	9.40	
10	752	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	26/3/2017	37.70	205	315	2/4/2017	6.10	23/4/2017	9.30	
11	753	KOSHI	T3- R25 Line	1:4 by volume	26/3/2017	37.70	205	315	2/4/2017	6.00	23/4/2017	7.80	
12	754	KOSHI	S-9 Line	1:4 by volume	28/3/2017	38.30	190	330	4/4/2017	6.10	25/4/2017	7.90	
13	755	KOSHI	R-21 Line	1:4 by volume	29/3/2017	38.60	180	315	5/4/2017	6.30	26/4/2017	8.00	
14	756	KOSHI	Cut of Wall WWTP	1:4 by volume	30/3/2017	39.00	180	345	6/4/2017	5.60	27/4/2017	7.80	
15	757	KOSHI	Cut of Wall WWTP	1:4 by volume	31/1/2017	39.40	180	335	7/4/2017	5.70	28/4/2017	8.00	
16	758	KOSHI	Cut of Wall WWTP	1:4 by volume	1/4/2017	39.40	180	335	8/4/2017	5.90	29/4/2017	8.00	
							MIN 45m	Max 600m	Required strength on 28 days not less than 7.5 N/MM2				
							MIN 45m	Max 600m	Required strength on 28 days More than 7.5 N/MM2 at 1:3				

SMEC-Brisbane-AQUA-CEMAT-BDA
 Approved by Construction Supervision Engineer/CSE
 Test Checked by A.C.S.E 
 Consultants Reps

CTCE-KALIKA J/V
 Submitted by Project Manager
 Test conducted by Q.C Manager
 Contractore Reps




SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT													
Biratnagar Sub-Metropolitant City													
SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 , M25/20 & M30/20 Work Mix													
FOR THE MONTH OF APRIL 2017											P.G-1		
S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Type of Material		Cube Crushing ,N/mm2		Remarks
					water	Cement	Sand	Aggregates	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	730	9/3/2017	M25 Work Mix	S-9 Line Top Slab	0.46	1	1.5	3.25	Shivam	Om shree C/plant	20.37	27.26	
2	731	10/3/2017	M20 Work Mix	SLUDGE BED	0.50	1	2	3.5	Shivam	Om shree C/plant	16.74	22.00	
3	732	22/3/2017	M20 Work Mix	WWTP PCC Facualty pond	0.50	1	2	3.5	Shivam	Om shree C/plant	17.63	22.81	
Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	13.4	20	
Specifacation Limit Table For M25/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	16.75	25	
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	20.1	30	
SMEC-Brisbane-AQUA-BDA					CTCE-KALIKA J/V								
Approved by Construction Supervision Engineer/CSE					Submitted by Project Manager								
Test checked by A.C.S.E 					Test conducted by Q.C Manager								
Consultants Reps					Contractors Reps 								



SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of APRIL 2017

P.G-1

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
1	MR 291	SHIVAM OPC	1/4/2017	36.0	186	310	All Cement Are Nepali BRAND
2	MR 292	SHIVAM OPC	2/4/2017	36.5	180	300	
3	MR 293	SHIVAM OPC	3/4/2017	35.8	200	295	
4	MR 294	SHIVAM OPC	4/4/2017	36.2	190	305	
5	MR 295	SHIVAM OPC	5/4/2017	36.4	205	295	
6	MR 296	SHIVAM OPC	6/4/2017	36.2	215	290	
7	MR 297	SHIVAM OPC	7/4/2017	35.6	210	295	
8	MR 298	SHIVAM OPC	8/4/2017	35.6	190	280	
9	MR 299	KOSHI OPC	9/4/2017	35.2	185	295	OPC
10	MR 300	KOSHI OPC	10/4/2017	36.1	175	305	
11	MR 301	KOSHI OPC	11/4/2017	36.3	180	285	
12	MR 302	KOSHI OPC	12/4/2017	35.8	205	285	
13	MR 303	KOSHI OPC	13/4/2017	36.7	185	290	
14	MR 304	KOSHI OPC	14/4/2017	36.3	190	305	
15	MR 305	KOSHI OPC	15/4/2017	37.0	195	315	
Requirements in accordance with BS 12/4027					> 45 Min.	10 Hrs	

SMCE-Brisbane-AQUA-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

[Signature]

CTCE-KALIKA J/V

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractores Reps

[Signature]



SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of APRIL 2017

P.G-2

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
16	MR 306	KOSHI OPC	16/4/2017	35.7	195	300	All Cement Are Nepali BRAND OPC
17	MR 307	KOSHI OPC	17/4/2017	36.5	205	305	
18	MR 308	SHIVAM OPC	18/4/2017	36.7	180	310	
19	MR 309	SHIVAM OPC	19/4/2017	35.9	180	305	
20	MR 310	SHIVAM OPC	20/4/2017	36.4	180	315	
21	MR 311	SHIVAM OPC	21/4/2017	35.8	210	285	
22	MR 312	SHIVAM OPC	22/4/2017	36.5	185	315	
23	MR 313	SHIVAM OPC	23/4/2017	36.3	200	290	
24	MR 314	KOSHI OPC	24/4/2017	35.7	195	295	
25	MR 315	KOSHI OPC	25/4/2017	35.5	190	295	
26	MR 316	KOSHI OPC	26/4/2017	35.9	205	310	
27	MR 317	KOSHI OPC	27/4/2017	36.1	185	315	
28	MR 318	KOSHI OPC	28/4/2017	36.7	195	310	
29	MR 319	KOSHI OPC	29/4/2017	36.5	205	285	
30	MR 320	SHIVAM OPC	30/4/2017	35.5	185	295	
Requirements in accordance with BS 12/4027					> 45 Min.	10 Hrs	
SMCE-Brisbane-AQUA-BDA Approved by C.S.E Test Checked by A.C.S.E Consultant Reps				CTCE-KALIKA J/V Submitted by Project Manager Test Conducted by Q.C Manager Contractores Reps			



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City

SUMMARY OF LAB TEST RESULT OF SUB GRADE

(For the Month of APRIL 2017)

P.G-1

S.N.	LAB REF. NO.	DESCRIPTION OF MATERIAL	Line	Change/Location	Modified Proctor Gm/CC		CBR %	REMARKS
					MDD	OMC %		
1	MR 74	Sub Grade	R3 Road	5+660 to 5+830	1.980	9.00	6.00	
2	MR 75	Sub Grade	T3L25B/C	0+00 to 1+165	1.980	9.00	5.60	
3	MR 76	Sub Grade	R-8 & T3L25A	0+00 to 1+110	1.980	9.00	6.50	
4	MR 77	Sub Grade	WWTP out side Road	0+000 to 0+330	1.980	9.00	5.50	
5	MR 77	Sub Grade	WWTP inside Road	0+000 to 0+090	1.980	9.00	5.5	south & West
6	MR 78	Sub Grade	R-21 Line	0+750 to 1+120	1.980	9.00	6.0	
7	MR 79	Sub Grade	R-26 & T2L19C	0+000 to 0+300	1.980	9.00	6.5	
8	MR 80	Sub Grade	R21 Bhumi prashan	0+000 to 0+200	1.980	9.00	5.4	
9	MR 81	Sub Grade	R25 Devi Marg	0+150 to 0+230	1.980	9.00	6.0	
10	MR 82	Sub Grade	T1L16C	0+000 to 0+170	1.980	9.00	6.0	
11	MR 83	Sub Grade	T1L16A	0+000 to 0+140	1.980	9.00	6.0	
12	MR 84	Sub Grade	T1L16B	0+00 to 0+204	2.160	7.00	7.5	
13	MR 85	Sub Grade	R21 Bhumi prashan	0+190 to 0+390	1.980	9.00	5.3	
14	MR 86	Sub Grade	R-78 Line	0+000 to 0+093	1.980	9.00	6.75	
15	MR 87	Sub Grade	R-10 Line	0+000 to 0+220	1.980	9.00	6.70	
16	MR 88	Sub Grade	R-76 Line	0+000 to 0+273	1.980	9.00	6.65	
							Min 5%	

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps



CTCE-KALIKA JV

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractors Reps




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SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitan City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF APRIL 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	305	4/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.2	
2	306	5/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.6	31.1	
3	307	6/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.5	31.1	
4	308	7/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.5	31.3	
5	309	8/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	30.9	
6	310	9/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.1	
7	311	10/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.3	30.9	
8	312	11/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.2	30.9	
9	313	12/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.1	31.4	
10	314	13/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.5	31.3	
11	315	14/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	31.5	
12	316	15/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.7	31.1	
13	317	16/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.1	
14	318	17/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.4	
15	319	18/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.5	31.6	
16	320	19/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.6	
17	321	20/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	30.5	31.3	

Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength

Min Required 20.1 30

SMEC-Brisbane-AQUA-BDA

Approved by Construction Supervision Engineer/CSE

Test checked by A.C.S.E

Consultants Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractors Reps



SECONDARY TOWNS INTEGRATED URBAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitan City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF APRIL 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
18	322	21/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.4	
19	323	22/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.5	31.2	
20	324	23/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.5	
21	325	24/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.8	31.3	
22	326	25/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	31.7	
23	327	26/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	31.3	
24	328	27/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.3	
25	329	28/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.7	
26	330	29/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.8	31.6	
27	331	30/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.7	31.6	
28	332	31/3/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.6	31.5	
29	333	1/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.3	
30	334	2/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.6	
31	335	3/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.6	

Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength

Min Required 20.1 30

SMEC-Brisbane-AQUA-BDA

Approved by Construction Supervision Engineer/CSE

Test checked by A.C.S.E

Consultants Reps

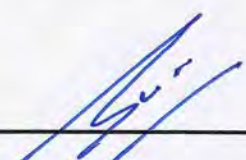


CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractors Reps




**SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING WORK MIX
FOR THE MONTH OF APRIL 2017**

Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength		Min Required	13.4	20
SMEC-Brisbane-AQUA-BDA Approved by Construction Supervision Engineer/CSE Test checked by A.C.S.E Consultants Reps	CTCE-KALIKA J/V Submitted by Project Manager Test conducted by Q.C Manager Contractors Reps			

**SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING WORK MIX
FOR THE MONTH OF APRIL 2017**

Specification Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength		Min Required	13.4	20
SMEC-Brisbane-AQUA-BDA Approved by Construction Supervision Engineer/CSE Test checked by A.C.S.E Consultants Reps	CTCE-KALIKA J/V Submitted by Project Manager Test conducted by Q.C Manager Contractors Reps			

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Contractors Reps

[Signature]

