

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 (October, 2016)

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

11 Nov, 2016



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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SMEC COMPANY DETAILS

SMEC International Pty Ltd
South Asia Regional Office, H-372, R-6, DOHS Baridhara, Dhaka, Bangladesh

Tel: +8802 841 3571

Fax: +8802 882 7545

Email: smec@smec.com

www.smec.com

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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 th December, 2013
Original Date of Completion	25 th May, 2016
Revised date of Completion	09 th March, 2017
Original Contract Amount with PS and VAT	NRs. 2,391,332,117.06
Revised Contract Amount including PS and VAT (After VO-2)	NRs 2,719,617,069.21
Paid Amount up to IPC 19	NRs. 1,659,803,667.86 (Including PS & VAT)
Physical Progress till October, 2016	60.22%
Financial Progress wrt VO-02	61.03%

2 INTRODUCTION/BACKGROUND

1. 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 October, 2016 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.

2. 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.

3. In line with ADB's Strategy 2020 and based on Nepal's fundamental longterm 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
- Contractor's Work Program (Revision 02) 05 December 2014, this has to be revised as the work progress is not consistent. The Contractor is advised to revise the work program and it is expected to receive by the end of August 2015. The Contractor has officially submitted the third (3rd) revised work program through the Contractor's letter in 15th September 2015 (received on 23rd September 2015). Revised Work schedule has to be submitted after EoT-01 (up to 09 March, 2017).

3. SUB-PROJECT COMPONENTS

3.1 SEWER LINES

4. 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	63,964.0
	Reinforced Concrete Pipe laying and jointing		16,612.0
	Line T1 (Secondary)	m	3,788.0
	Line T2 (Trunk)	m	8,370.0
	Line T3 (Trunk)	m	4,136.0
	Line T4 (Secondary)	m	318.0
	HDPE laying and jointing	m	47,352.0
	Line T1 (Secondary)	m	7,124.0
	Line T2 (Trunk)	m	19,410.0
	Line T3 (Trunk)	m	18,606.0
	Line T4 (Secondary)	m	22,12.0
2	Manhole (Brick / RCC)	no.	2,036
3	Sewer Inlet	no.	3,766.00
4	House Connection	no.	5,930.00
5	Reinstatement of Roads	km	66.06

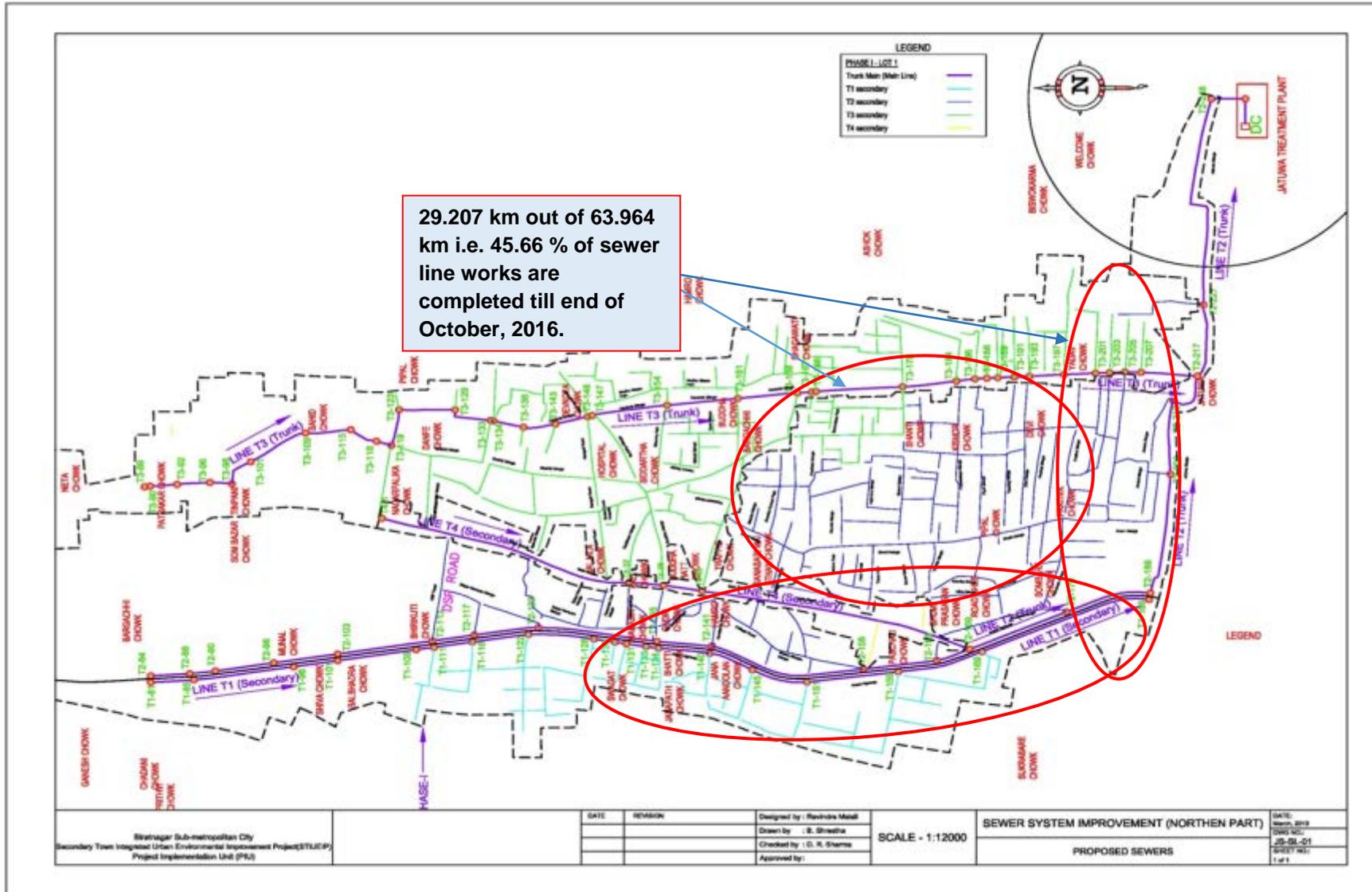


FIGURE. 1 PROPOSED SEWER LINES IN BSMC

3.2 Storm Water Drains

5. 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
III	Outfall	no	15
IV	Rain Inlet	no	30
V	Manhole	no	30
VI	Canal Crossing	no	11
B	Storm Drain for Southern Part		
I	Brick Masonry Drain	m	8,483
II	Cleaning and Maintenance of Existing Drain	m	7,273
III	Culverts	no	38
C	Rehabilitation of Existing Drain		
I	Drain Cover	m	30,467
II	Cleaning and Maintenance of Existing Drain	m	33,601

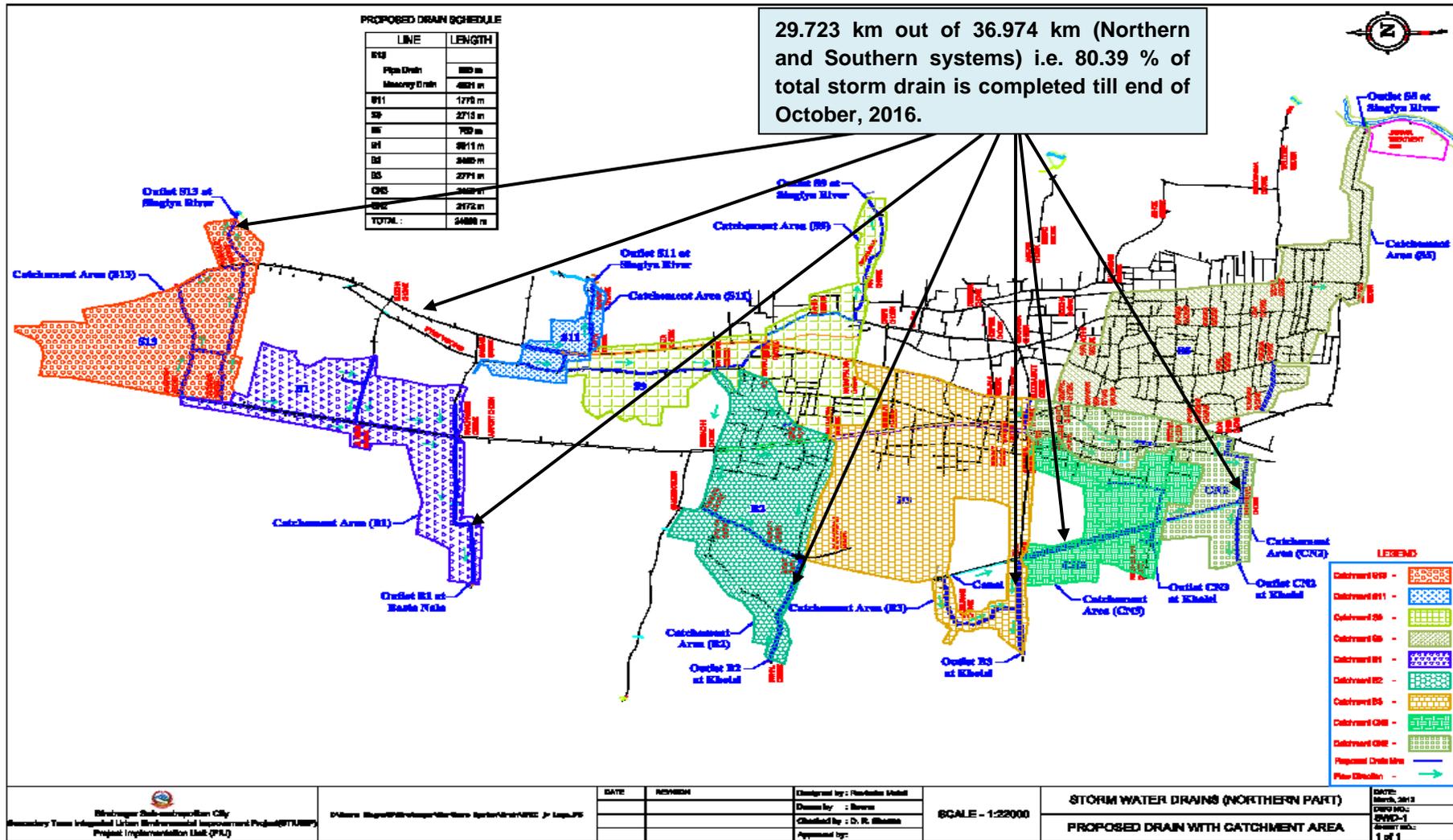


Figure 2: Proposed Storm Water Drains in BSMC (Northern Drainage System)

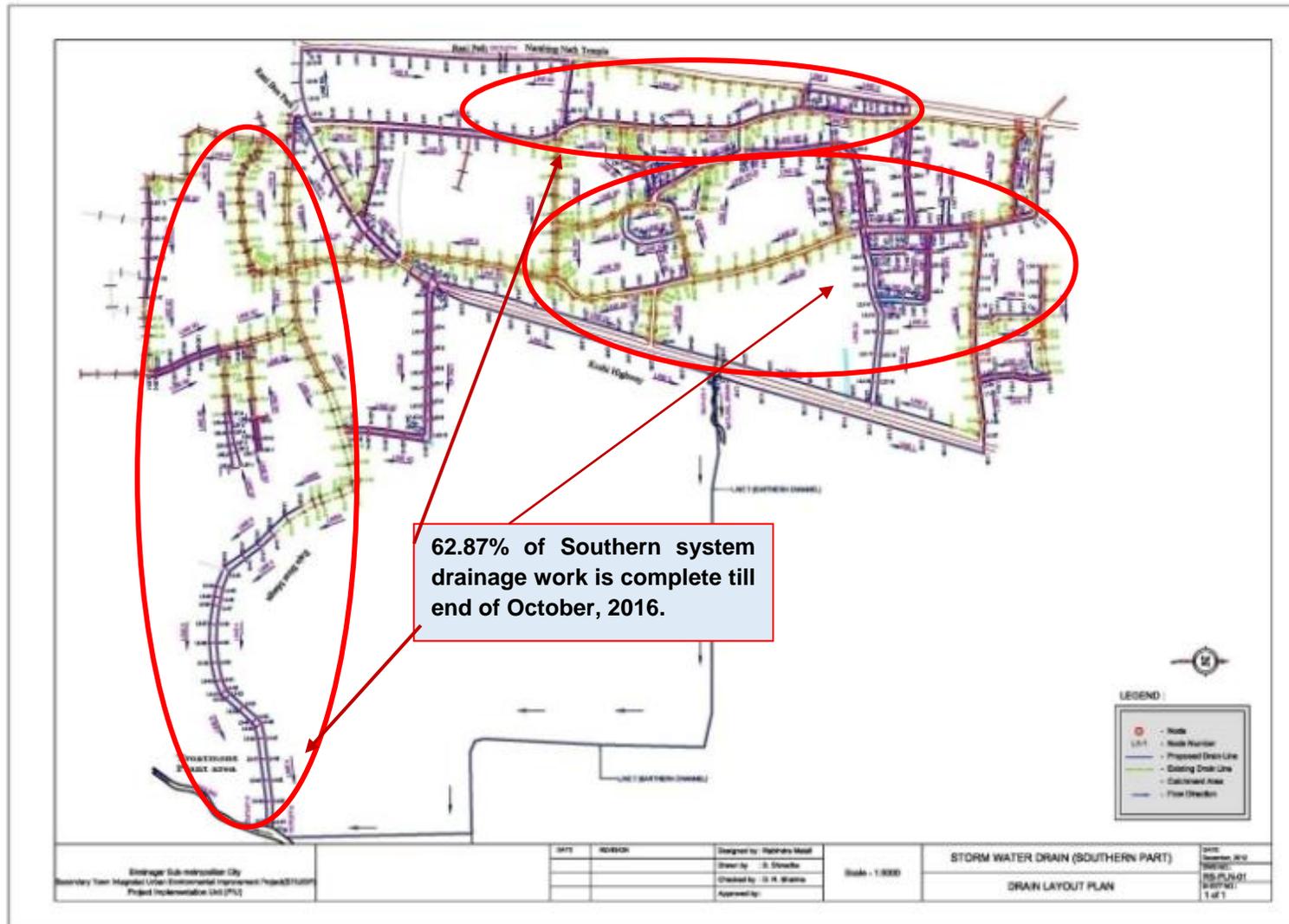


Figure 3: Proposed Storm Water Drains in BSMC (Southern Drainage System)

3.3 WASTE WATER TREATMENT PLANTS

6. 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

26	River training works	m	600
27	Electromechanical works	Set	1
28	Lab Equipment and installation	Set	1

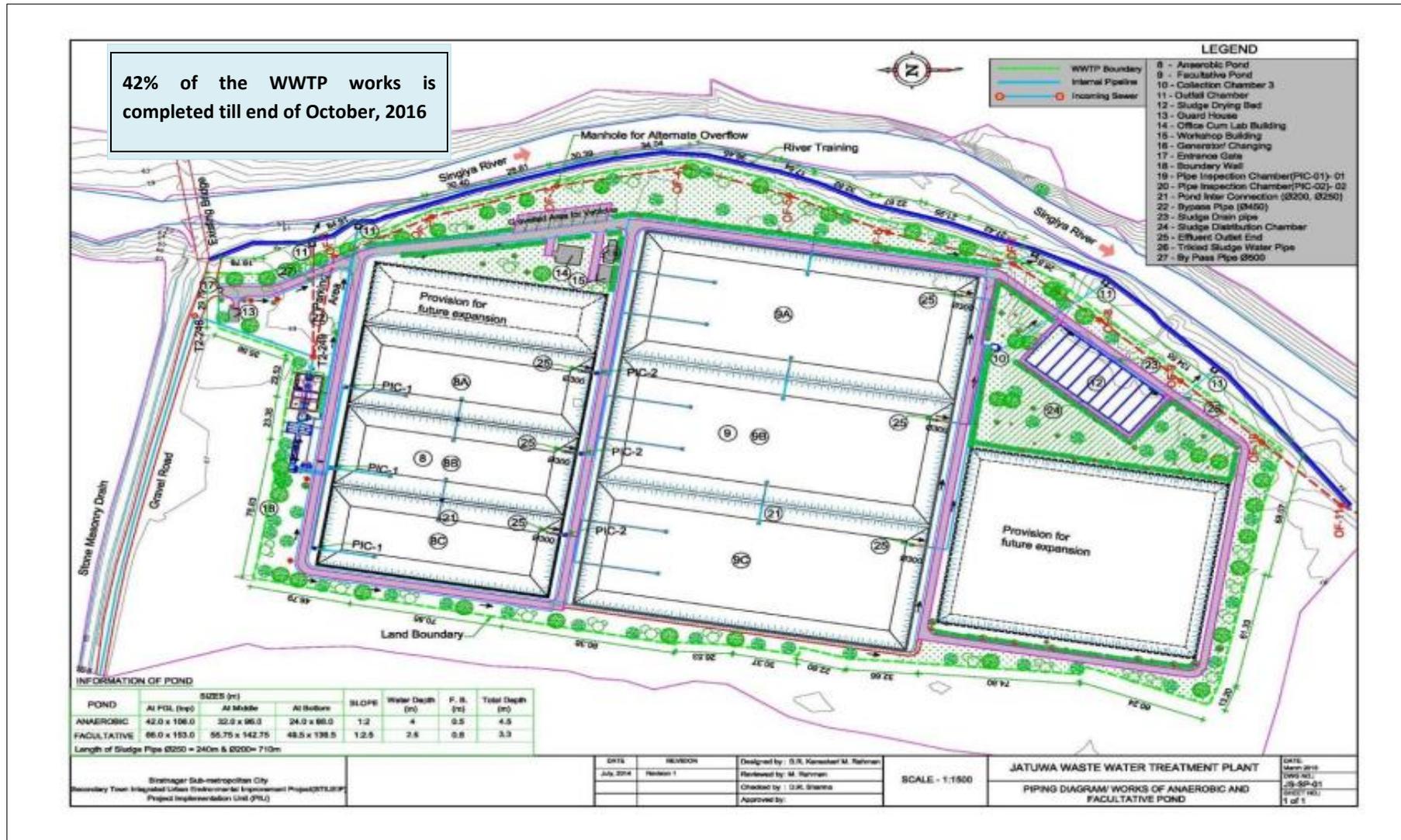


Figure 4: Proposed Waste Water Treatment Plant at Jatuwa in BSMC

3.4 Roads and Lanes

7. 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 2.35 Km road improvement from Pushpalal chowk to Bhatta chowk is near to complete ie. 2.096 Km length is black topped 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 Bhatta Chowk)	2.35 Km
Reinstatement and Road Improvements (under sewer line installation)	63.71Km

3.5 Environmental Aspect

8. 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 (2055BS) schedule-3, IEE is required for Operations of Sewerage Schemes under Schedule 1.h.2.e (pertaining to Rule3). The final report on IEE was submitted and MoUD had approved the IEE on May14, 2013.

9. 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 inhabitants and facilitate transportation. Nevertheless, it is imperative to look into positive as well as negative impacts of such infrastructure development works in the urban area.

10. 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.

3.6 SOCIAL ASPECT

11. 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).

12. As there is slack period of the construction due to monsoon, currently, the drain work has been stopped due to rain water and construction materials.

3.7 Financial Plan

13. 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 and 56.79% (up to May, 2016). Hence the remaining disbursement 43.21 % will be done in third year.

3.8 DISBURSEMENT RECORDS IN CONSTRUCTION

Table 5: Disbursement Record in Construction to Date

S.N.	Description of Payment	Total Bill Amount with VAT & PS	Amount in NRs.
1	IPC 01		209,400,000.00
2	IPC 02	29,553,479.92	27,853,500.98
3	IPC 03	50,406,775.75	47,507,270.95
4	IPC 04	44,819,505.68	42,241,392.52
5	IPC 05	23,380,168.96	22,035,291.99
6	IPC 06	90,796,339.68	85,573,541.38
7	IPC 07	80,854,600.52	76,203,672.17
8	IPC-08	122,334,488.86	115,297,549.23
9	IPC-09	116,092,187.14	109,414,317.97
10	IPC-10	132,327,417.89	124,715,663.77
11	IPC-11	169,853,829.07	160,083,476.07
12	IPC-12	23,121,515.46	16,931,906.24
13	IPC-13	85,563,926.44	62,658,539.06
14	IPC-14	163,562,505.71	119,776,967.67
15	IPC-15	139,008,112.96	101,795,764.14
16	IPC- 16	137,640,413.95	100,794,196.94

17	IPC-17	135,118,714.02	98,947,553.85
18	IPC-18	39,288,088.98	28,770,702.33
19	IPC-19	76,081,596.87	1,340,601,307.24
	Total payment to date including PS & VAT and Excluding mobilization	1,659,803,667.86	

4. OBJECTIVES AND SCOPE OF WORKS

4.1 OBJECTIVES

14. The following are the expected physical infrastructure improvement outputs of the project in Biratnagar:
- Drainage and sewerage systems improvement.
 - Urban roads and lanes improvement.
15. 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

16. 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

17. The Contractor has resumed the works from mid December 2015 in difficult situation due to Madesh Strikes and partial fuel supply. Storm drains at B1, B2, B3, S9, S5, CN2, CN3 and Rani Area are being continued.

The contractor has completed storm water drain about 29.723 km out of 36.974km, 80.39% till October, 2016.

5.2 SEWER LINES

18. 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 are being continued as well as RCC pipes are also being continued with full strength.

The Contractor has completed sewer lines with HDP and RCC pipes about 29.207km out of 63.964 km which is 45.66%, till October, 2016.

The proposal of the precast concrete manholes, sewer inlets and house connection chambers has been submitted for review and approval. A conditional approval in consultation with the Employer has been given to the Contractor to prepare few numbers and to demonstrate at site. If 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. Now, the Consultant has been approved the same as revised design.

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

19. Office cum laboratory building, workshop building and generator / changing house at WWTP, Jatuwa are completed. The Contractor had stopped activities except compound wall of WWTP site.

Now the Contractor is carrying out landscaping, embankment filling, remaining boundary wall at WWTP from mid December 2015. Structure work in Sump well has been revised as per site condition.

5.4 ROAD AND LANES IMPROVEMENT WORKS

20. 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 Bhatta Chowk on 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 batta chowk. 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 14.303km out of 127.138 km, 11.25% till October, 2016.

5.5 CONSTRUCTION MATERIALS

21. The fabrication of steel moulds for precast units- manholes, sewer inlets and house connection chamber are continuing after the strikes at Madesh / Tarai 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, drain cover slabs etc.) at the Contractor's Camp, Katahari from mid December 2015.

5.6 CONSTRUCTION MATERIAL TESTING LAB

22. 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.

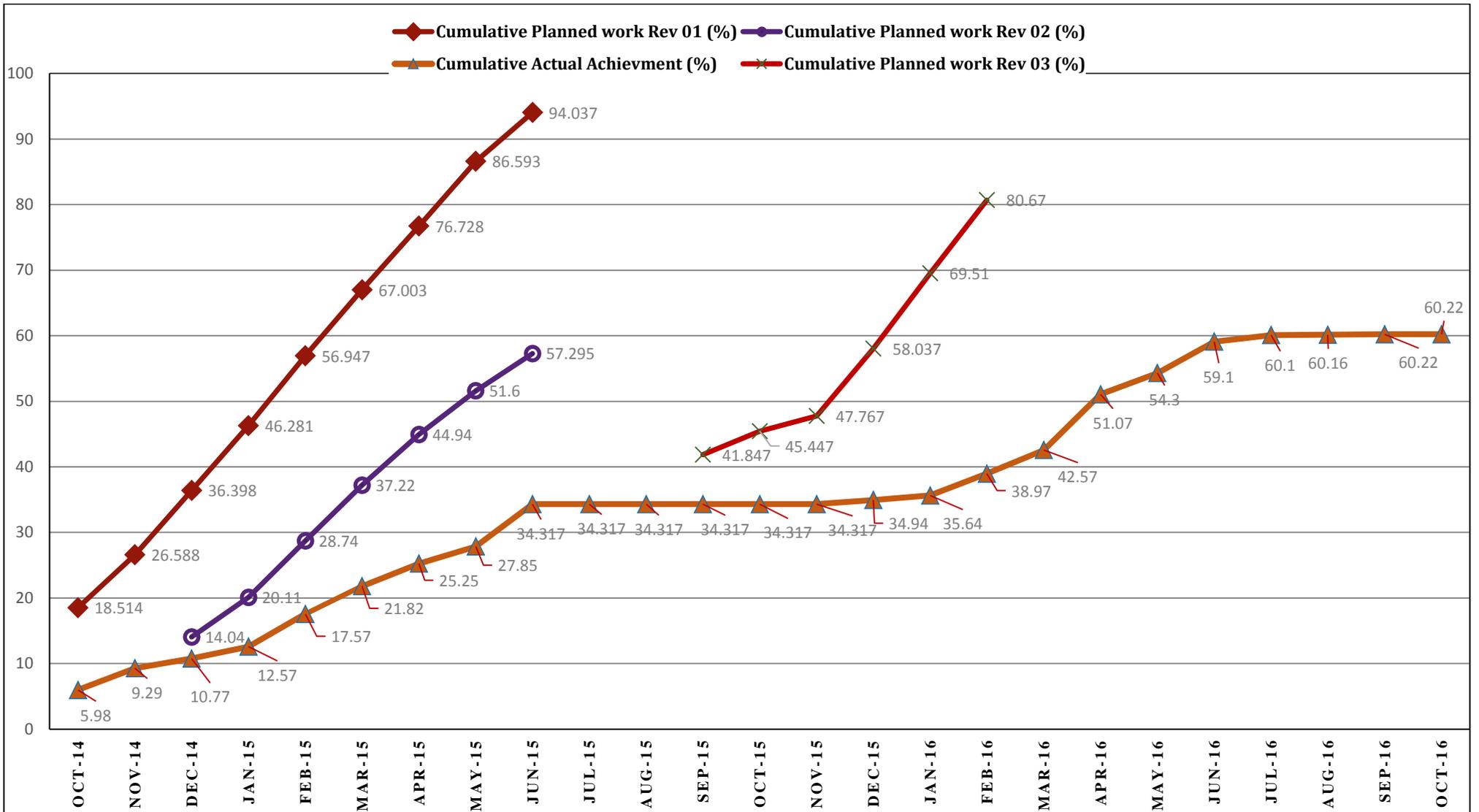
5.7 PHYSICAL PROGRESS TILL OCTOBER, 2016

23. Total physical progress till October, 2016 is about 60.22% whereas the cumulative planned progress till 25th May 2016 is 100%, wrt work program rev. no 03. The progress of the work is lagging behind by 39.84%. (After EOT, **Revised work scheduled has to be provided**).

Table 6: Plan vs. Actual Progress till October, 2016

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				
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	60.22				
Progress lagging to date wrt the revised work plan rev 03 (%)		(33.87)	(41.70)	48.89	46.75	45.70									



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.

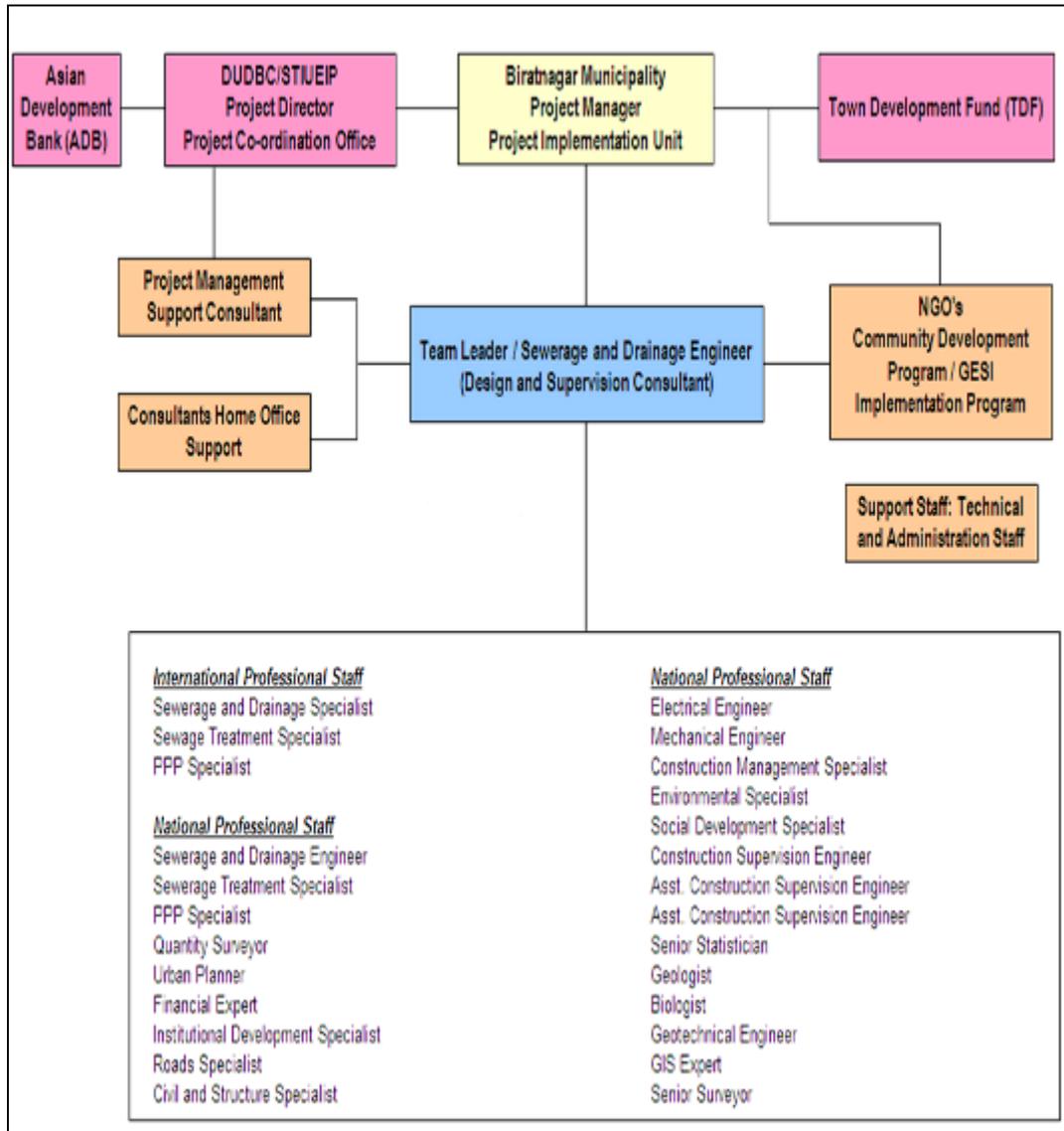


Figure 6: Organization and Staffing of STIUEIP, Biratnagar

6.2 Inception Report

24. The Inception Report was prepared and submitted on 29 February, 2012.

6.3 CONCEPTUAL CATCHMENT PLAN AND DESIGN CRITERIA

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

6.4 SURVEY

26. The survey was completed in August, 2012

6.5 DESIGN

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

28. 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

29. 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

30. 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.

31. 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.

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

6.8 FINAL REPORT

33. 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.**

34. 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	524,502,513	16.0%
Asian Development Bank (ADB)	24,213,539	2,130,791,460	65.0%
Biratnagar Sub-Metropolitan City (BSMC)	2,980,128	262,251,257	8.0%
Town Development Fund (TDF)	4,097,676	360,595,478	11.0%

6.9 CONSULTANT'S ACTIVITIES IN CONSTRUCTION PHASE

35. 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	Giresch Chand	Officiating Team Leader/CSE
2	Jaya Prakash Yadav	Asst. Construction Supervision Engineer-1
3	Dikendra Katwal	Asst. Construction Supervision Engineer-2
4	Rajesh Yadav	Junior Engineer-1
5	Sujan Shrestha	Junior Engineer-2
6	Bibek Yadav	Junior Engineer-3
7	Jay Prakash Yadav	Junior Engineer-4
8	Santosh Yadav	Office Manager
9	Ramji Gimire	Driver-1
10	Suman Ghimire	Driver-2
11	Ramila Ghimire	Office Assistant

36. 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 October, 2016

Table 9: Key dates of events /activities:

S. No	Date	Activities/Events	Remarks
1	22 Oct,2016	Mr.Shekhar Bonu,Director Urban Dev.& Water Division,ADB .Manila,Ms.Laxmi Sharma,Ms.Vivian Castro have been visited Site	
2			

7 DETAILS OF ACTIVITIES CARRIED OUT IN THIS MONTH

7.1 PHYSICAL PROGRESS IN THIS MONTH

Table 10: Physical Progress in Storm Water Drains:

Physical Progress till October 2016						
S.N.	Location	Proposed Length (m)	Progress		Total to Date (m)	Progress (%)
			Up to Sep 2016 (m)	This Month (m)		
1	B1	3,950	3628.00	0	3628.00	91.85
2	B2	3,742	3724.00	0	3724.00	99.52
3	B3	3,514	3363.00	0	3363.00	95.69
4	S5	1,932	1172.00	0	1172.00	60.67
5	S9	3,178	2120.00	0	2120.00	66.71
6	S11	2,092	2082.00	0	2082.00	99.52
7	S13	5,640	4864.00	0	4864.00	86.23
8	CN2	2,273	2142.00	0	2142.00	94.24
9	CN3	2,170	1122.00	0	1122.00	51.71
10	Rani	8,483	5333.00	0	5333.00	62.87
	Total	36,974	29550.00	0	29550.00	79.92

Table 11: Physical Progress in Road Side Drains:

Physical Progress till October 2016							
S.N.	Location	Length (m)	Total Length (m)	Progress		Total to Date (m)	Progress (%)
				Up to Sep 2016 (m)	This Month (m)		
1	R2	6,440.0	12,880.0	6,325	0	6,325	49.11
2	R3	3,393.0	6,786.0	1682	0	1,682	24.79
3	R4	970.0	1,940.0	660	0	660	34.02
4	R5	1,715.0	3,430.0	700	0	700	20.41
5	R13	220.0	440.0	390	0	390	88.64
6	R15	506.0	1,012.0	406	0	406	40.12
7	R16	796.0	1,592.0	395	0	395	24.81
8	R22	358.0	716.0	385	0	385	53.77
9	R24	396.0	792.0	286	0	286	36.11
10	R25	606.0	1,212.0	208	0	208	17.16
11	R26	861.0	1,722.0	898	0	898	52.15
12	R27	997.0	1,994.0	525	0	525	26.33
13	R64	121.0	242.0	121	0	121	50.00
14	R107	347.0	694.0	155	0	155	22.33
15	T2L18O	150.0	300.0	268	0	268	89.33
16	T3L26C	197.0	394.0	355	0	355	90.03

17	T3L26E	98.0	196.0	48	0	48	24.49
18	T3L26F	137.4	274.8	205	0	205	74.60
19	T3L28	74.0	148.0	145	0	145	97.97
20	Boundary Wall	1,322.7		1,133	0	1,133	85.66
21	Road Side Drain	127,138		14,303	0	14,303	11.25

Table 12: Physical Progress in Sewer Lines:

Table 12: Physical progress in sewer line:

S.N.	Location	As per estimate		This month		Upto Previous Month		Update work		% work		Reming Quantity		Remarks
		Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	
1	HDPE (T1)	7124.00	220.00	0.00	0.00	3186.80	107.00	3186.80	107.00	44.73	48.64	3937.20	113.00	
2	HDPE (T2)	19410.00	663.00	0.00	0.00	11047.75	390.00	11047.75	390.00	56.92	58.82	8362.25	273.00	
3	HDPE (T3)	18606.00	597.00	0.00	0.00	6024.90	215.00	6024.90	215.00	32.38	36.01	12581.10	382.00	
4	HDPE (T4)	2212.00	72.00	0.00	0.00	112.00	3.00	112.00	3.00	5.06	4.17	2100.00	69.00	
5	Sub Total (HDPE)	47352.00	1552.00	0.00	0.00	20371.45	715.00	20371.45	715.00	43.02	46.07	26980.55	837.00	
6	Hume pipe(T1)	3788.00	106.00	0.00	0.00	1726.50	47.00	1726.50	47.00	45.58	44.34	2061.50	59.00	
7	Hume pipe(T2)	8370.00	247.00	0.00	0.00	4967.50	115.00	4967.50	115.00	59.35	46.56	3402.50	132.00	
8	Hume pipe(T3)	4136.00	123.00	0.00	0.00	2141.30	45.00	2141.30	45.00	51.77	36.59	1994.70	78.00	
9	Hume pipe(T4)	318.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	318.00	8.00	
10	Sub Total (Hume pipe)	16612.00	484.00	0.00	0.00	8835.30	207.00	8835.30	207.00	53.19	42.77	7776.70	277.00	
11	Total (HDPE + Hume pipe)	63964.00	2036.00	0.00	0.00	29206.75	922.00	29206.75	922.00	45.66	45.28	34757.25	1114.00	

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

Physical progress till October 2016								
S.N	Description	Proposed Quantity (no)	This month	Upto Previous Month	Update work	% work	Reming Quantity	Remark
1	Manhole	2036	0	922	922	45.28	1114.00	
2	Sewer inlet	3766	0	367	367	9.75	3399.00	
3	House connection chamber	5930	0	96	96	1.62	5834.00	

Table 14: Physical Progress in Roads and Lanes:

Physical Progress till October 2016						
S.N.	Location	Proposed Length (km)	Progress		Total to Date (m)	Progress (%)
			Up to Sep 2016 (m)	This Month (m)		
1	All roads including WWTP road	66.06	Sub-grade=2176m Sub Base=2176m Base=2176m Prime Coat=2096m Asphalt Concrete=2096m	Sub-grade=0m Sub-base=0m Base=0m Prime Coat=0m Asphalt Concrete=0m	Sub-grade=2,176m Sub-base=2,176m Base=2176m Prime Coat=2096m Asphalt Concrete=2096m	

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

Physical Progress till October 2016						
S.N.	Description	Proposed Quantity	Progress		Total to Date	Remarks
			Up to Sep 2016	This Month		
1	Anaerobic Pond	3 nos	3 (excavation)	0	3 (excavation)	
2	Facultative Pond	3 nos	2 (Excavation)	0	2 (excavation)	
3	River Training Work	600 m	600 m	0	600 m	
4	Boundary Wall	1322.70m	1133 m	0	1133 m	85.66%
5	Office cum Lab Building	1 no	1 no	0	1	
6	Workshop Building	1 no	1 no	0	1	
7	Generator / Changing House	1 no	1 no	0	1	
8	Sump Well	1 no	0	0	0	

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

Physical Progress till October 2016						
S.N.	Description	Unit	Progress		Total to Date (no)	Remarks
			Up to Sep 2016 (no)	This Month (no)		
1	Precast Slab	No	87570	0	87570	
2	Precuts	No	9209	0	9209	
3	Kerb Stone	No	23135	0	23135	

4	Manhole	No	2200	0	2200	
5	Sewer Inlet	No	1499	0	1499	
6	House Connection Chamber	No	1346	0	1346	

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

:

Physical Progress till October 2016						
S.N.	Description	Diameter (mm)	Progress		Total to Date (no)	Remarks
			Up to Sep 2016 (no)	This Month (no)		
1	RCC Pipe	200	2,123	0	2,123	
2	RCC Pipe	300	328	0	370	
3	RCC Pipe	350	216	0	216	
4	RCC Pipe	400	370	0	370	
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	1296	
9	RCC Pipe	900	278	0	278	
10	RCC Pipe	1000	1011	0	1,019	
11	RCC Pipe	1600	373	0	373	
	Total		7,643	0	7,643	

Contractor's Manpower**Table 18: Contractor's key staffs in October 2016:**

Designation	No	Remarks
Project / Contract Manager	1	
Planning Engineer/Construction Engineer	1	
Construction Engineer	1	
Site Engineers	1	
Quality Control Manager	1	
Office/Bill Engineer	1	
Junior Engineer	3	
Sub Overseers	2	
Safety Manager / Senior Site Supervisor	1	
Accountant / Office Manager	1	
Lab Assistant	1	
Store Keeper	2	
Light Drivers	2	
Machine Operator	1	
Site Supervisor	0	
Other Supporting Staff	4	
Skilled Labor at Site	14	
Unskilled Labor at Site	42	

Contractor's Equipment:

Table 19: Contractor's Equipment: At Judi camp

Equipment	No	Remarks
Excavator	4	
Back Hoe JCB	3	
Grader	0	
Crane / Teller	1	
Water Tanker	3	
Tractor	7	
Tipper	4	
Light Vehicle	2	
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)

This report records the project implementation performance of social safeguard aspect for the duration of November 2015 and highlights the key activities undertaken during the period. The activities on the social development during the period are summarized below:

8.1 SOCIAL ISSUES

8.1.1 OPERATIONAL GUIDE LINES FOR COMMUNITY MOBILIZATION AND IMPLEMENTATION OF CDP

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

37. 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**

38. 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**

39. 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**

40. 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**

41. The core activities of the project i.e. sewerage pipe laying, drain construction and road/ lane improvement provided employment to about 250 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**

42. 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 in the month November 2015.

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

43. Following are the key issues affected in progress:

- Disturbance from existing water supply pipe lines network, under-ground cables, electric poles etc.

10 WORK PLAN FOR THE NEXT MONTH

44. 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 to be submitted by the Contractor after EoT:**

- Road side drain construction
- Road Works at R2 Road
- Sewer line construction
- Maintenance work as per instruction/required.

ANNEX2: PHOTOGRAPHS – October 2016



Road Maintenance at T2 line 18X



Road Maintenance at R3 (Dharambandh)

११. श्री पुलचोक माहिस्ट प्रस्ताव संख्या STIUEIP, PIU

निर्णयसभ

निर्णय नं. १

स्थापकिक भाग विहाय आयोजना वानी - बिप्लवग - इच्छी हादन आयोजना का-तंगह निर्माणार्थन कार्य तथा STIUEIP PIU वाट निर्माण कार्य गर्ने कामा संस्कृता सुपारिषा माटौडी डिफिकीहड का- काफनो कार्यसत्र अनुसा तथा संविद्य संस्थासत्र निर्णय गरियो।

निर्णय नं. २

STIUEIP, PIU द्वारा निर्माणार्थन कार्यसत्रको Contractor ला गर्ने निर्माण कार्यको work schedule नियमित रूपमा सम्बन्धित line Agencies (विद्युत, वनविपानी, टेलिकम र TRIP, RBID) लाई उपलवध गराउन निर्णय गरियो।

निर्णय नं. ३

विशालगढ उपमहानगरपालिका रीइन्फोर्स चोड मा Sewerline विद्ययाउन कार्यसत्रालागि उक्त स्थानमा रहेको नेपाल टेलिकम को ग्रैनहोल सिफ्टिड, गर्ने TRIP, RBID आयोजनाले कार्य स्थान निर्धारण गरिदिने र नेपाल टेलिकमले उक्त ग्रैनहोल हादन कार्य वाट कार्य प्रारम्भ गरी 6 (सात) दिन भित्र टेलिकमले वकल्पित व्यवस्था गरी STIUEIP, PIU वाट निर्माण कार्य प्रारम्भ गर्ने निर्णय गरियो।

ANNEX-7: LABORATORY TEST RESULTS OF OCTOBER, 2016

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

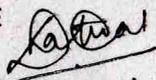
SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 Work Mix
FOR THE MONTH OF OCTOBER 2016

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	496	9/9/2016	M20 Work mix	R-3 Line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	17.19	21.78	
2	497	10/9/2016	M20 Work mix	R-22 line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	17.04	21.70	
3	498	11/9/2016	M20 Work mix	R-22 line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	17.19	21.93	
4	499	13/9/2016	M20 Work mix	R-3 Line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	16.81	21.85	
5	500	15/9/2016	M20 Work mix	R-3 Line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	16.15	21.26	
6	501	15/9/2016	M20 Work mix	R-22 line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	16.52	21.48	
7	502	16/9/2016	M20 Work mix	R-3 Line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	16.74	21.63	
8	503	16/9/2016	M20 Work mix	R-22 line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	16.52	21.93	
9	504	17/9/2016	M20 Work mix	R-3 Line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	15.93	22.07	

Specifacation Limit Table For M25/20 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



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 OCTOBER 2016

Date	WEATHER Record						Temp.c		
	Sunny	Windy	Cloudy	Morning Rain HRS	Night Rain Hrs.	Day Rain Hrs.	9:00 AM	5:00 PM	Rain Fall MM
1	Sunny						32.5	29.8	
2	Sunny						34.6	30.1	
3	Sunny						34	29	210
4	Sunny						33.6	30.2	
5	Sunny						32.4	29.5	
6	Sunny						31.6	28.4	
7	Sunny						32.2	27.8	
8	Sunny								Dashain
9	Sunny								
10	Sunny								
11	Sunny								
12	Sunny								
13	Sunny								
14	Sunny								
15	Sunny								
16	Sunny								
17	Sunny								
18	Sunny						30.2	27.8	Holi day
19	Sunny						28.6	26.4	
20	Sunny						29.8	27.4	
21	Sunny						29.4	26.4	
22	Sunny						30.2	28.4	
23	Sunny						29.4	26.2	
24	Sunny								
25	Sunny								
26	Sunny								
27	Sunny								
28	Sunny								
29	Sunny								
30	Sunny								TIHAR
31	Sunny								HOLI DAY

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved By C.S.E

Record Checked By A.C.S.E

Consultant Reps

Actual

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 MORTAR COMPRESSIVE STRENGTH TEST WORK MIX CUBE

FOR THE MONTH OF OCTOBER 2016

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	338	Shivam	R-22 Line Work Mix	1:4 by volume	9/9/2016	38.00	190	320	16/9/2016	6.30	7/10/2016	7.89	
2	339	Shivam	R-3 Line work mix	1:4 by volume	9/9/2016	38.10	200	330	16/9/2016	6.40	7/10/2016	7.89	
3	340	Shivam	R-22 Line Work Mix	1:4 by volume	12/9/2016	38.00	180	335	19/9/2016	6.40	10/10/2016	8.30	
4	341	Shivam	R-3 Line work mix	1:4 by volume	12/9/2016	38.30	185	330	19/9/2016	6.30	10/10/2016	8.03	
5	342	Shivam	R-22 Line Work Mix	1:4 by volume	13/9/2016	38.10	195	340	20/9/2016	6.40	11/10/2016	7.76	
6	343	Shivam	R-3 Line work mix	1:4 by volume	13/9/2016	38.30	200	330	20/9/2016	6.30	11/10/2016	7.89	
7	344	Shivam	R-3 Line work mix	1:4 by volume	14/9/2016	38.10	180	335	21/9/2016	6.50	12/10/2016	8.16	
8	345	Shivam	R-22 Line Work Mix	1:4 by volume	16/9/2016	38.30	190	330	23/9/2016	6.30	14/10/2016	7.89	
9	346	Shivam	R-3 Line work mix	1:4 by volume	17/9/2016	37.90	205	335	24/9/2016	6.30	15/10/2016	8.30	
10	347	Shivam	R-22 Line Work Mix	1:4 by volume	17/9/2016	38.60	180	330	24/9/2016	6.50	15/10/2016	7.76	
							MIN 45m	Max 600m	Required strength on 28 days not less than 7.5 N/MM2				

SMEC-Brisbane-AQUA-BDA-CEMAT

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 Kerb Stone Work Mix

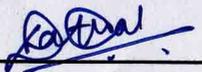
FOR THE MONTH OF OCTOBER 2016

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	29 K	5/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	17.00	22.50	
2	30K	6/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	17.30	21.90	
3	31K	13/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	17.00	22.80	
4	32K	14/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	17.50	22.10	
5	33K	15/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	16.30	22.10	
6	34K	16/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	15.40	20.70	
7	35K	17/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	15.70	21.60	
8	36K	19/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	16.10	21.40	
9	37 K	19/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	15.90	21.30	

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



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

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING WORK MIX

FOR THE MONTH OF OCTOBER 2016

S.N.	Lab Ref No.	Date of Casting	Deetails 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	MR 143	3/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.3	22.0	
2	MR 144	4/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	21.9	
3	MR 145	5/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.9	21.0	
4	MR 146	6/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.0	21.9	
5	MR147	8/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.8	22.5	
6	MR 148	9/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.9	22.7	
7	MR 149	10/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.9	22.2	
8	MR 150	10/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.7	21.9	

Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength

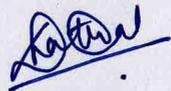
Min Required 13.4 20

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



ANNEX-8: CONTRACTOR'S PROGRESS REPORT- OCTOBER, 2016

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 – 35

October 2016

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

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1. Introduction
2. Project Component
3. Salient Feature
4. Scope of Work
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 - 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
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 - c. Material at Site
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ANNEX

- i. Organization Chart
- ii. Site Photographs
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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 . 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 singhya 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 which was not included in original contract.

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	09 March 2017
Original Contract Period	900 Days
Original Contract amount with PS & VAT	NRs 2,391,332,117.06
Revised Contract amount after VO # 02. with PS & VAT	NRs 2,719,617,069.21

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 differ 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)

SN	Description	Unit	Total Up to Previous Month	This Month	Total Up to to this Month	Remarks
1	Northern Part	Rm	23,717.56	0	23,717.56	
2	Southern Part	Rm	5669.00	0	5669.00	
3	Road Side Drain	Rm	14,300.8	0	14,300.8	

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

SN	Description	Unit	Total Up to Previous Month	This Month	Total Up to this Month	Remarks
1	Hume Pipe	Rm	11100	0	11100.00	
2	HDPE Pipe	Rm	23563.00	0	23563.00	
3	uPVC Pipe	Rm	2291.00	0	2291.00	
4	Manhole (Brick and RCC)	Nos	922	0	922	
5	Sewer Inlet	Nos.	363	0	363	
6	House Connection	Nos.	96	0	96	

C. Road Works (Work Progress till the date)

SN	Description	Unit	Total Up to Previous Month	This Month	Total Up to this Month	Remarks
1	Road improvement at R2 Road	Rm	2096	0	2096	

D. Wastewater Treatment Plant Sub-Project (Work Progress till the date)

S.N.	Description of Work	This month	Total Length/Nos	Program for Next Month	Remarks
1	Excavation of Ponds- Anaerobic	0	3 nos		
2	Excavation of Ponds- Facultative	0	2 nos		
3	River Training Works	0	515m		
4	Boundary wall construction	0	580 m		
5	Office cum lab building, WWTP, Jatuwa	All complete except finishing works			
5	Workshop Building & Generator/Changing Building, WWTP, Jatuwa	All complete except finishing works			
6	Sump Well	Partially excavated			

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

S.N.	Description	Unit	Quantity			Remarks
			Till Previous Month	Till This Month	This Month Work	
1	Slabs	Nos	87570	87570	0	
2	Precuts	Nos.	9209	9209	0	
3	Kerb Stone	Nos.	23135	23135	0	

F. Production of Precast Chambers at Contractor's Yard Katahari

S.N.	Description	Unit	Quantity			Remarks
			Till Previous Month	Till This Month	This Month Work	
1	Manhole	Nos	2200	2200		
2	Sewer Inlet	Nos.	1499	1499		
3	House Connection	Nos.	1346	1346		

G. 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	0	0	0	0	0	0	0	0
Total Production	2123	328	216	370	84	551	963	1296	278	1011	373

H.Next month programme

- 1.Road side drain.
- 2.Sub base and Sub grade prepration at R2 road.
- 3.Road maintainance.
- 4.Precast production at contractor's yard.

6. Financial Progress and Cash Flow

Financial Progress

Installment Number	Total Bill Amount With Vat and PS(NRs)	Net Payble 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	76,081,596.87	55,714,620.72		IPC 19
Total amount of Ipc=	1,659,803,667.86	1,396,315,926.96	61.03%	Progress Percentage WRT Contract amount after VO .02 With Vat and PS

7. Details of Safeguard activities

Till the date no such issues have been faced relating to the Social, Environmental and Resettlement matter.

8. Key Issues and Remarks

Following issues were raised in this month

- Submitted Claim No.01 to 07 has not addressed up to this month.
- Lack of BoQ item such as; Reinforcement, Brickwork, M25 Concrete, shoring etc.
- Delay in approval of VO.03
- Lack of Amount in Provisional sum which has created delima in shifting Electric pole and Water supply pipe lines.

Mobilized Resource

A. Details of Contractor’s Personnel at Site

S.N.	Designation	No.	Remarks
1	Project/ Contract Manager	1	
2	Planning/ Construction Engineer	1	
3	Construction Engineer	1	
4	Site Engineers	5	
5	Quality Control Manager	1	
6	Office/ Bill Engineer	1	
7	Junior Engineer	10	
8	Sub-Overseer	6	
9	Senior Site Supervisor/Safety Manager	1	
10	Accountant/ Office Manager	1	
11	Lab Assistant	3	
12	Site Supervisor	5	
13	Store Keeper	4	
14	Light Drivers	6	
15	Machine Operator	14	
16	Other Supporting Staffs	18	
17	Skilled Labors	>80	
18	Unskilled Labors	> 150	

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

S.N.	Particular	Model/Type	Capacity	Working Status		
				No of used Equipment	Status	Remarks
A	Vehicle and Equipment					
A.1	Excavators					
	Komatsu Long Boom PC200	PC200		1	Good	
	Komatsu Excavator PC200	PC200		2	Good	
	Komatsu Excavator PC120	PC 120		1	Good	
	Hundai Excavator PC200	PC 200		1	Good	
	Cat Excavator 320	Caterpillar		1	Good	
A.2	JCB					
	JCB Hydra	JCB		1	Good	
	CAT Loader	CAT		1	Good	
	CAT Backhoe	CAT		3	Good	
A.3	Crane/Teller					
	Crane with Teller			1	Good	
	Teller			1	Good	
A.4	Water Tanker					
	Water Tanker		12000 Lt.	1	Good	
	Water Tanker		6000Lt	1	Good	
A.5	Tractors/Tipper					
	Tractors	Indian	3 m ³	7	Good	
	Tipper		15 m ³	4	Good	
A.6	Service Vehicle					
	Jeep	Pajero	5 door	1	Good	
	Pickup	Toyota	4 door	1	Good	
	Motorbike	125CC		10	Good	
A.7	Other Equipment and Tools					
	Kerb Stone Machine Set			1	Good	
	Generator	Jackson	125KVA	1	Good	
	Generator	Kirloskar	20KVA	2	Good	
	Generator	Kirloskar	10KVA	1	Good	
	Generator	Honda	5KVA	1	Good	
	Generator	Super	5KVA	1	Good	
	Generator	Lutian	2.5 KVA	1	Good	
	Welding Machine	Oswal,India	650amp	1	Good	
	Welding Machine		350amp	1	Good	
	Welding Machine		250amp	1	Good	
	Diesel tank with Pump		60000	1	Good	

S.N.	Particular	Model/Type	Capacity	Working Status		
				No of used Equipment	Status	Remarks
			Ltr.			
	Stand Drill Machine	India	1 HP	1	Good	
	Gas Cutter Set			1	Good	
	Pipe Cutter			1	Good	
	Hand Grinder			1	Good	
	Plate Compactor			2	Good	
	Monkey Jumper			3	Good	
B	Concreting Unit					
	Batching Plant CONMAT all Set	CONMAT, India	45 m3/ hr	1	Good	
	Electric Vibrator with Needle			10	Good	
	Bar Bending Machine		4 ton/hr	3	Good	
	Bar Cutter Machine		4 ton/hr	3	Good	
	Manual Mixture Machine			6	Good	
C	Roller					
	Pneumatic Tyre Roller			1	Good	
	Steel Roller			1	Good	
	Asphalt Concrete Production					
	Asphalt Concrete Plant		50 ton/ hr	1	Good	
D	Decanter			1	Good	
	Asphalt Paver Machine			1	Good	

c. Detail of Construction Material at Site / Contractor's yard

SN	Materials	Unit	Previous Stock	Consumed	Stock up to Date	Remarks
1	Sand	Cum	1796.232		1796.232	
2	Aggregate	Cum	3417.168		3417.17	
3	Cement	Bags	768		768	
4	Reinforcement	Ton	206.92		206.92	
5	Brick	Nos.	12523		12523	
5	Sub base	Cum	142.66		142.66	
6	uPVC Pipe					
	Ø160	Rm	2345.00		2345.00	
	Ø110	Rm	3607.00		3607.00	
7	RCC Hume Pipe					
	Ø200	Rm	1166.00		1166.00	
	Ø300	Rm	40.00		40.00	
	Ø350	Rm	87.50		87.50	
	Ø400	Rm	18.00		18.00	
	Ø500	Rm	120.00		120.00	
	Ø600	Rm			0.00	
	Ø700	Rm	600.00		600.00	
	Ø900	Rm	0.00		0.00	
	Ø1000	Rm	0.00		0.00	
	Ø1600	Rm	0.00		0.00	
8	HDPE Pipe				0.00	
	Ø200	Rm	5271.00		5271.00	
	Ø250	Rm	368.50		368.50	
	Ø110	Rm			0.00	
9	CI Cover	Rm	161.00		161.00	

9. Conclusion

Partial contract work is being carried out this month due to Dashain and Tihar festival.

ANNEX

Photographs of the Month



Picture 1 Curing of casted Cover slab at Contractor's yard



Picture 2 Road Maintenance work

LAB REPORT SUMMARY

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

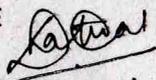
SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 Work Mix
FOR THE MONTH OF OCTOBER 2016

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	496	9/9/2016	M20 Work mix	R-3 Line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	17.19	21.78	
2	497	10/9/2016	M20 Work mix	R-22 line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	17.04	21.70	
3	498	11/9/2016	M20 Work mix	R-22 line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	17.19	21.93	
4	499	13/9/2016	M20 Work mix	R-3 Line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	16.81	21.85	
5	500	15/9/2016	M20 Work mix	R-3 Line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	16.15	21.26	
6	501	15/9/2016	M20 Work mix	R-22 line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	16.52	21.48	
7	502	16/9/2016	M20 Work mix	R-3 Line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	16.74	21.63	
8	503	16/9/2016	M20 Work mix	R-22 line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	16.52	21.93	
9	504	17/9/2016	M20 Work mix	R-3 Line Pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	15.93	22.07	

Specifacation Limit Table For M25/20 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



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 OCTOBER 2016

Date	WEATHER Record						Temp.c		
	Sunny	Windy	Cloudy	Morning Rain HRS	Night Rain Hrs.	Day Rain Hrs.	9:00 AM	5:00 PM	Rain Fall MM
1	Sunny						32.5	29.8	
2	Sunny						34.6	30.1	
3	Sunny						34	29	210
4	Sunny						33.6	30.2	
5	Sunny						32.4	29.5	
6	Sunny						31.6	28.4	
7	Sunny						32.2	27.8	
8	Sunny								Dashain
9	Sunny								
10	Sunny								
11	Sunny								
12	Sunny								
13	Sunny								
14	Sunny								
15	Sunny								
16	Sunny								
17	Sunny								
18	Sunny						30.2	27.8	Holi day
19	Sunny						28.6	26.4	
20	Sunny						29.8	27.4	
21	Sunny						29.4	26.4	
22	Sunny						30.2	28.4	
23	Sunny						29.4	26.2	
24	Sunny								
25	Sunny								
26	Sunny								
27	Sunny								
28	Sunny								
29	Sunny								
30	Sunny								TIHAR
31	Sunny								HOLI DAY

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved By C.S.E

Record Checked By A.C.S.E

Consultant Reps

Actual

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 MORTAR COMPRESSIVE STRENGTH TEST WORK MIX CUBE

FOR THE MONTH OF OCTOBER 2016

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	338	Shivam	R-22 Line Work Mix	1:4 by volume	9/9/2016	38.00	190	320	16/9/2016	6.30	7/10/2016	7.89	
2	339	Shivam	R-3 Line work mix	1:4 by volume	9/9/2016	38.10	200	330	16/9/2016	6.40	7/10/2016	7.89	
3	340	Shivam	R-22 Line Work Mix	1:4 by volume	12/9/2016	38.00	180	335	19/9/2016	6.40	10/10/2016	8.30	
4	341	Shivam	R-3 Line work mix	1:4 by volume	12/9/2016	38.30	185	330	19/9/2016	6.30	10/10/2016	8.03	
5	342	Shivam	R-22 Line Work Mix	1:4 by volume	13/9/2016	38.10	195	340	20/9/2016	6.40	11/10/2016	7.76	
6	343	Shivam	R-3 Line work mix	1:4 by volume	13/9/2016	38.30	200	330	20/9/2016	6.30	11/10/2016	7.89	
7	344	Shivam	R-3 Line work mix	1:4 by volume	14/9/2016	38.10	180	335	21/9/2016	6.50	12/10/2016	8.16	
8	345	Shivam	R-22 Line Work Mix	1:4 by volume	16/9/2016	38.30	190	330	23/9/2016	6.30	14/10/2016	7.89	
9	346	Shivam	R-3 Line work mix	1:4 by volume	17/9/2016	37.90	205	335	24/9/2016	6.30	15/10/2016	8.30	
10	347	Shivam	R-22 Line Work Mix	1:4 by volume	17/9/2016	38.60	180	330	24/9/2016	6.50	15/10/2016	7.76	
							MIN 45m	Max 600m	Required strength on 28 days not less than 7.5 N/MM2				

SMEC-Brisbane-AQUA-BDA-CEMAT

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 Kerb Stone Work Mix

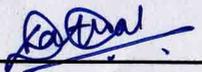
FOR THE MONTH OF OCTOBER 2016

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	29 K	5/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	17.00	22.50	
2	30K	6/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	17.30	21.90	
3	31K	13/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	17.00	22.80	
4	32K	14/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	17.50	22.10	
5	33K	15/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	16.30	22.10	
6	34K	16/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	15.40	20.70	
7	35K	17/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	15.70	21.60	
8	36K	19/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	16.10	21.40	
9	37 K	19/9/2016	M20 Work Mix	Kerb Stone Casted on Yard	0.50	1	2	3.5	Shivam	Om shree C/plant	15.90	21.30	

Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength

Min Required 13.4 20

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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 M20/20 SLAB CASTING WORK MIX

FOR THE MONTH OF OCTOBER 2016

S.N.	Lab Ref No.	Date of Casting	Deetails 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	MR 143	3/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.3	22.0	
2	MR 144	4/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	21.9	
3	MR 145	5/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.9	21.0	
4	MR 146	6/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.0	21.9	
5	MR147	8/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.8	22.5	
6	MR 148	9/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.9	22.7	
7	MR 149	10/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.9	22.2	
8	MR 150	10/9/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.7	21.9	

Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength

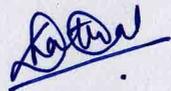
Min Required 13.4 20

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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

