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 (May, 2015)

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

05 June 2015

Biratnagar Sub-Metropolitan City, Nepal

AUSTRALIA | ASIA | MIDDLE EAST | AFRICA | PACIFIC

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

PREPARATION, REVIEW and AUTHORISATION

Revision	Date	Prepared by	Reviewed by	Approved for Issue by
	05 June 2015	DSC		

ISSUE REGISTER

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SMEC COMPANY DETAILS

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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
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
Consultant	SMEC in association with Brisbane/AQUA/BDA/CEMAT
Contractor	CTCE-KALIKA Joint Venture
Date of Commencement	8tth December, 2013
Date of Completion	25th May, 2016
Contract Period	900 days from date of commencement
Time elapsed till May 2015	540 days from date of commencement (**60.0%)**
Contract amount with Provisional Sum	NRs. 2,119,054,525.90
Add 13%VAT	NRs. 272,278,000.00
Variation Order No 1 with 13% VAT	NRs 99,753,075.60
Total Contract Amount with VAT & PS	NRs. 2,491,085,601.50
Paid Amount of IPC 01	NRs. 209,400,000.00 (Mobilization Advance Payment)
Paid Amount of IPC 10	**NRs. 110,962,146.75**
Total Paid Amount from IPC 01 to IPC 10	**NRs. 846,488,683.94**

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 May, 2015 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 Town 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 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
   - Contractor's Work Program (Revision 02) under review 05 December 2014

3. SUB-PROJECT COMPONENTS

3.1 SEWER LINES

4. The prioritized sewer lines for Final Detailed Engineering Report of BSMC are as follows:

Table 1: Proposed Sewer Lines in BSMC

S N.	Description	Unit	Quantity
1	**Sewerage Pipe Supply and Installation**		**62,835.0**
	Reinforced Concrete Pipe laying and jointing		**15,748.0**
	Line T1 (Secondary Line T2 (Trunk)	m m	3,788.0 7,506.0
	Line T3 (Trunk)	m	4,136.0
	Line T4 (Secondary)	m	318.0
	HDPE laying and jointing		**47,087.0**
	Line T1 (Secondary	m	7,124.0
	Line T2 (Trunk)	m	19,410.0
	Line T3 (Trunk)	m	18,341.0
	Line T4 (Secondary)	m	22,12.0
2	**Manhole (Brick / RCC)**	**no.**	**2,019**
3	**Sewer Inlet**	**no.**	**3,766.00**
4	House connection	no.	5,930.00
5	Reinstatement of Roads	km	64.50

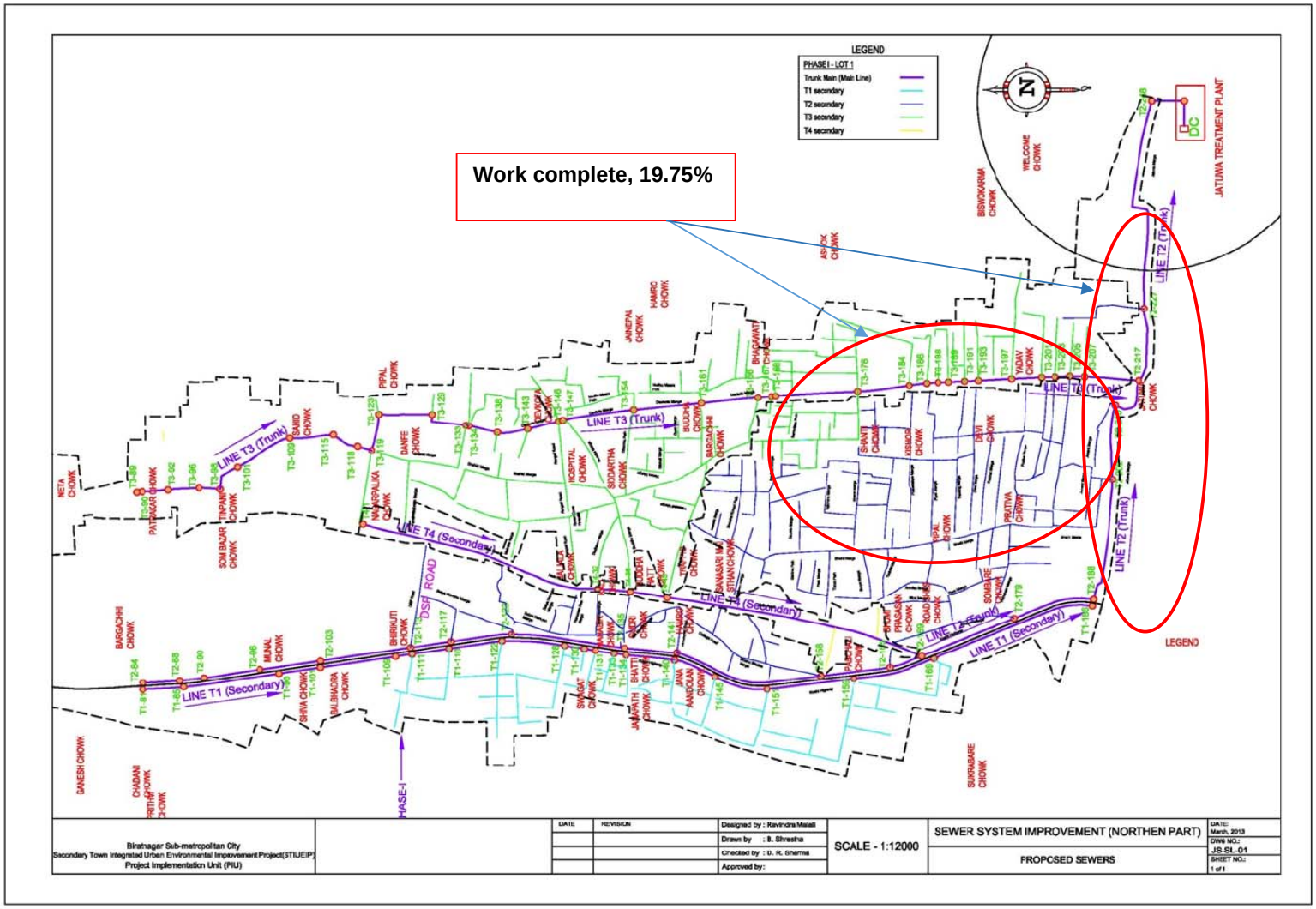


FIGURE. 1 PROPOSED SEWER LINES IN BSMC

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 1,324.2 Ha and 73.21 cum/sec.

Table 2: Proposed Storm Water Drains in BSMC

S. No.	Description	Unit	Quantity
A	**Storm Drain for Northern Parts**		**39,379.00**
I	Storm Drain Lines	m	**25,388**
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	**13,991**
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

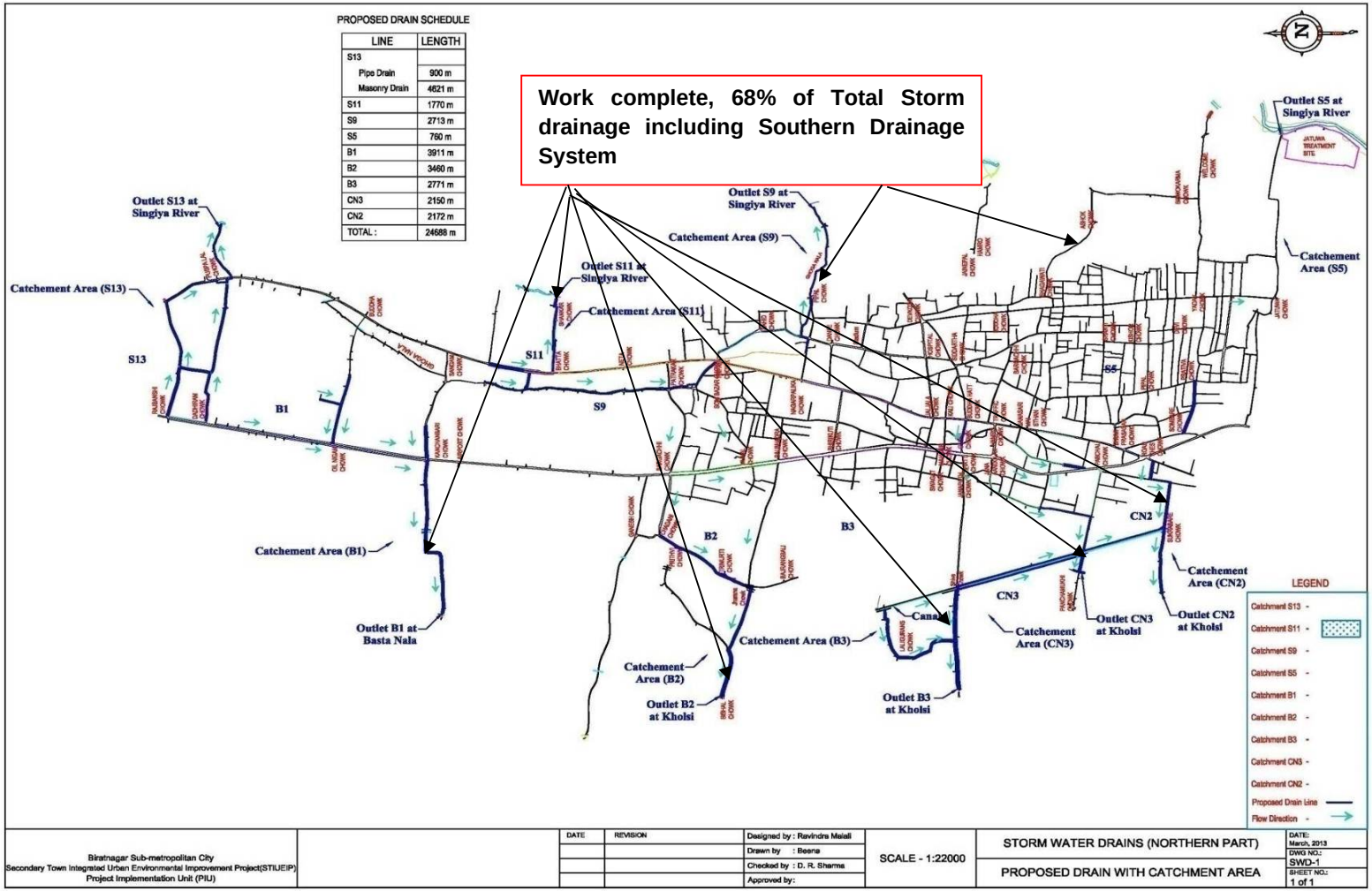


Figure 2: Proposed Storm Water Drains in BSMC (Northern Drainage System)

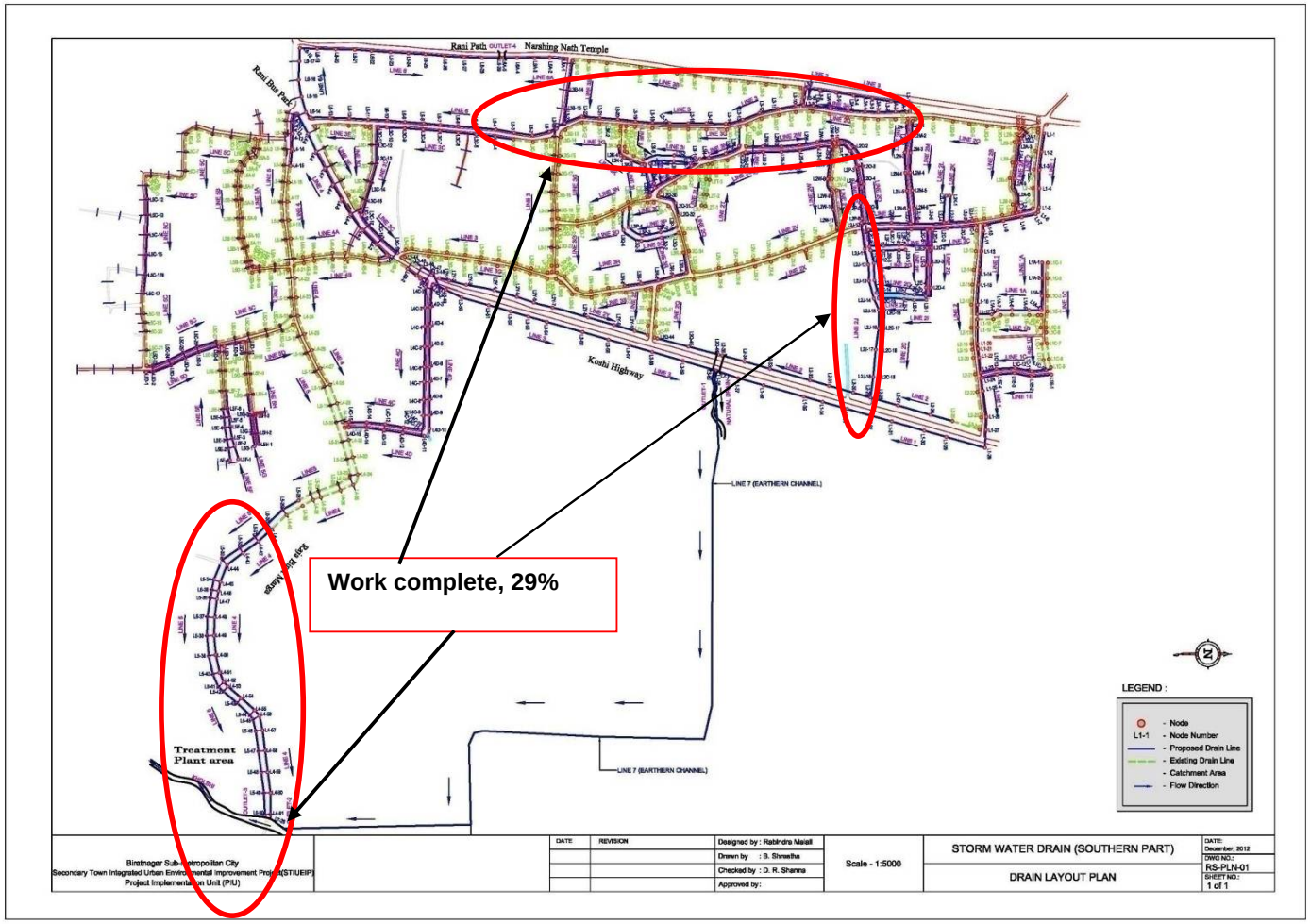


Figure 3: Proposed Storm Water Drains in BSMC (Southern Drainage System)

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 in filtration 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 areas is estimated at 650.08LPS. The maximum quantity of the waste water for Phase I areas only is estimated at 213.97 LPS. The capacity of the Phase I WWTP has been adopted as 214LPS. The capacity of the Phase II WWTP will be thus 436LPS. 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	CollectionChamber2	no	1
8	Grit Chamber	no	2
9	CollectionChamber3	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	Electro mechanical works	Set	1
28	Lab Equipment and installation	Set	1

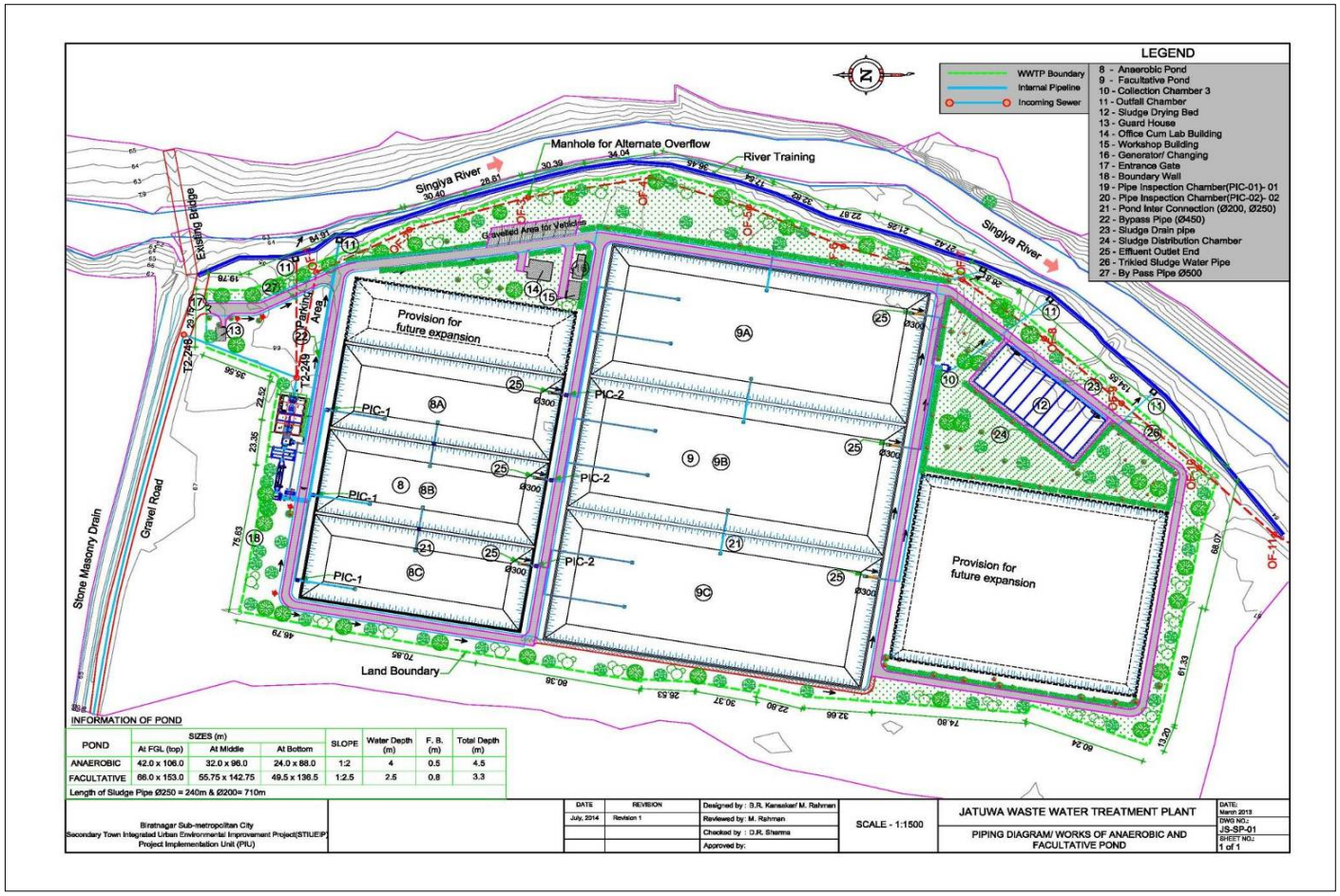


Figure 4: Proposed Waste Water Treatment Plant at Jatuwa in BSMC

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, whereas 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. Almost necessary streets are already constructed 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 Puspalal Chowk to Bhatta Chowk)	2.5 Km
Reinstatement and Road Improvements (under sewer line installation)	62.0 Km

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 guidelines 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 Rule 3). The final report on IEE was submitted and MUD 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.

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. The SDS in DSC involved in reporting and reviewing the community activities in May 2015.

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. The seventh meeting of safeguard desk held this month.

The regular monitoring visits have provided insights into the social development aspects of the project to the DSC. The community development programs are going on through the Tole Lane Organizations (TLOs). Almost 130 TLOs of 17 wards of the BSMC have been mobilized for this. Prior to the start of such community development activities, the DSC had analyzed the data of poor and disadvantaged groups (DAGs) living in the various tole/ clusters identified by the poverty mapping by applying the participatory tools. 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 (FriPAD).

12. DSC has prepared minutes of meeting No 7, please refer to **Annex-6.**

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.

3.8 DISBURSEMENT RECORDS IN CONSTRUCTION

Table 5: Disbursement Record in Construction to Date

S.N.	Description of Payment	Payment Items	Amount in NRs.
1	M/S Prabidhi International	Ditch Cleaning Equipment	3,300,000.00
2	M/S CTCE-Kalika JV	IPC 01	209,400,000.00
3	M/S CTCE-Kalika JV	IPC 02	27,853,500.98
4	M/S CTCE-Kalika JV	IPC 03	47,507,270.95
5	M/S CTCE-Kalika JV	IPC 04	42,241,392.52
6	M/S CTCE-Kalika JV	IPC 05	22,035,291.99
7	M/S CTCE-Kalika JV	IPC 06	85,573,541.38
8	M/S CTCE-Kalika JV	IPC 07	76,203,672.17
9	M/S CTCE-Kalika JV	IPC-08	115,297549.23
10	M/S CTCE-Kalika JV	IPC-09	109,414,317.97
11	M/S CTCE-Kalika JV	IPC-10	110,962,146.75
		Total in NRs.	**849,788,683.94**

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 improved.
- Urban roads and lanes improved.

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 not met the target set for storm water drain construction in this month. The works had been affected by less effort observed during this month. The contractor has completed about 28 km out of 41km, 68%.

5.2 SEWER LINES

18. The Contractor has submitted to the Consultant monthly programs of March and April 2015 for the sewer line works. The Contractor has completed about 12 km out of 63 km (20%) sewer line with HDPE pipes and RCC pipes. The construction of manhole, sewer inlets and house connection chambers are in progress.

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, then the Consultant will release for unconditional approval.

Recently, the precast concrete house connection chambers, sewer inlets and manholes are being installed at sites and found to be effective and we are able to open traffic at the shortest possible time and especially where the business center with crowds (in R5 and R65 Roads) are 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. The unconditional approval to proceed with production of precast units will be granted within couple of weeks.

5.3 WASTEWATER TREATMENT PLANT

19. Office cum laboratory building, workshop building and generator / changing house at WWTP, Jatuwa are complete. The Contractor has stopped all activities at WWTP site.

5.4 ROAD AND LANES IMPROVEMENT WORKS

20. The Contractor has completed the rehabilitation / repair of existing drain of about 6 km in R2 road. The Contractor has shifted more than 150 numbers of electrical poles and 35 numbers of telephone poles. The shifting of the pole was scheduled to complete by 28th Chaitra 2071 (11 April 2015). But still there are number of poles to be shifted. The installation of Kerbs for footpath in is progress.

The sub-grade preparation for widening portion had started in R2 road but now it is stopped due to relocation of water supply pipes from canal crossing to Panitanki.

5.5 CONSTRUCTION MATERIALS

21. The contractor has stocked sufficient construction materials like coarse aggregates, fine aggregates, cement, reinforcement etc at his yard, Katahari. The fabrication of steel moulds for precast units- manholes, sewer inlets and house connection chamber are in progress.

5.6 CONSTRUCTION MATERIAL TESTING LAB

22. Construction material testing laboratory has been set up at the Contractor's camp at Katahari.

Necessary suitability and routine tests for construction materials are being carried out in regular basis. The details of the test results of the month are in summary of Lab test results in Annex-7.

5.7 PHYSICAL PROGRESS TILL END OF MAY 2015

23. The total physical progress achieved till 31 May 2015 is about 28 % whereas the cumulative planned progress till April 2015 is 52%. The progress of the work is lagging behind by 24% compared to the planned works till end of May 2015 (based on work scheduled Rev 02).

Table 6: Plan Vs Actual Progress till May 2015 2015

Plan Vs Progress									
Month	**Sep-14**	**Oct-14**	**Nov-14**	**Dec-14**	**Jan-15**	**Feb-15**	**Mar-15**	**Apr-15**	**May-15**
Planned Work (%) Rev 01	0.576	1.416	8.074	9.81	9.883	10.666	10.056	9.725	9.865
Cumulative Planned work (%)	**17.098**	**18.514**	**26.588**	36.398	46.281	56.947	67.003	76.728	86.593
Planned Work (%) Rev 02				4.76	6.07	8.63	8.478	7.724	6.654
Cumulative Planned work (%)				**14.04**	**20.11**	**28.74**	**37.22**	**44.94**	**51.60**
Acutal achievment (%)	0.421	0.169	3.305	1.48	1.80	5.00	4.25	3.43	2.60
Cumulative Actual Achievment (%)	**5.81**	**5.98**	**9.29**	**10.77**	**12.57**	**17.57**	**21.82**	**25.25**	**27.85**
Progress to date wrt the revised work plan (%)		(12.53)	(17.30)	(3.27)	(7.54)	(11.17)	(15.40)	(19.70)	**(23.75)**

The contractor is lagging behind by **24 %** in his own program whereas **60.0 %** of the contract period has already been elapsed.

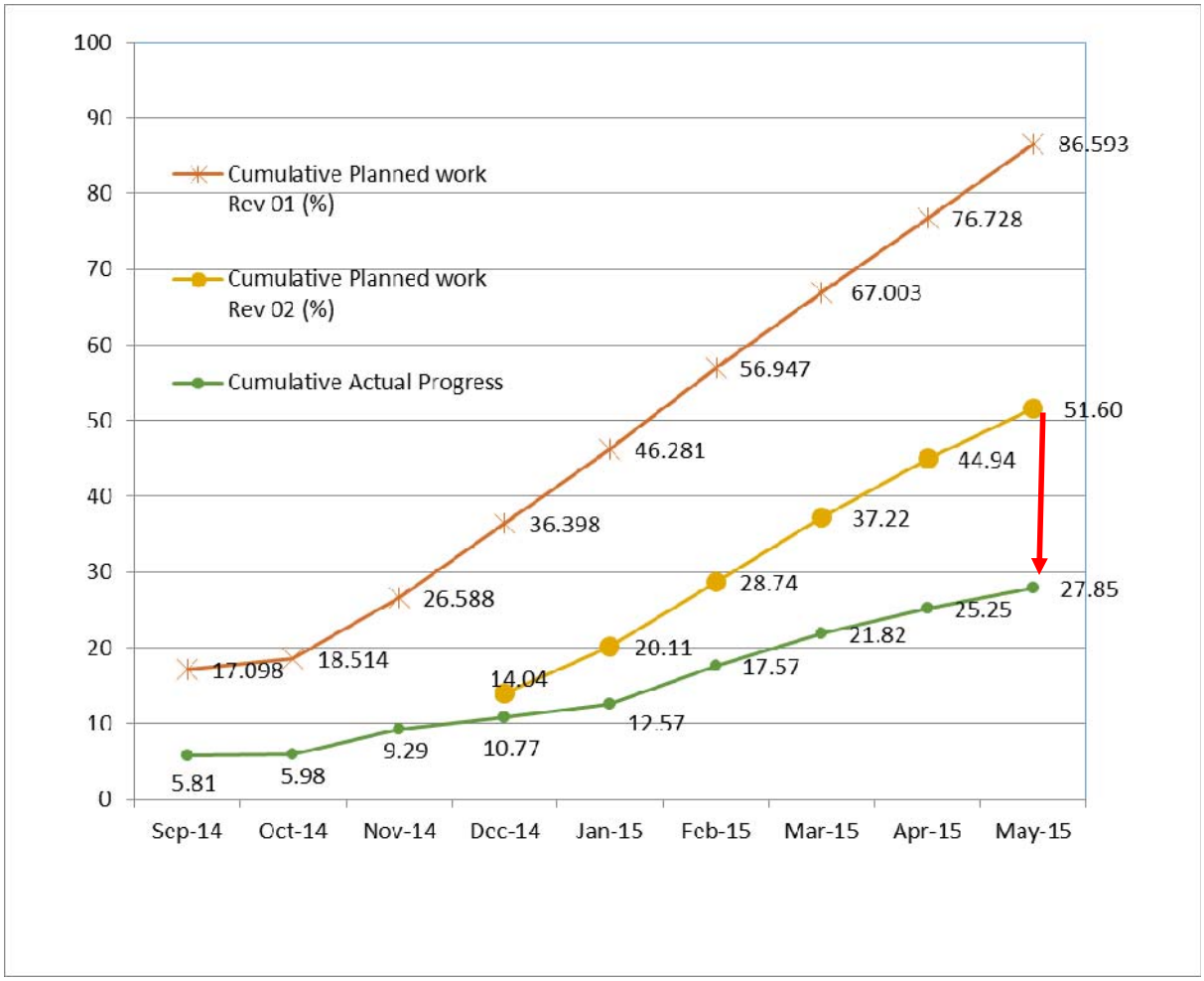


Figure 5: Plan Vs Actual Progress till end of May 2015.

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.

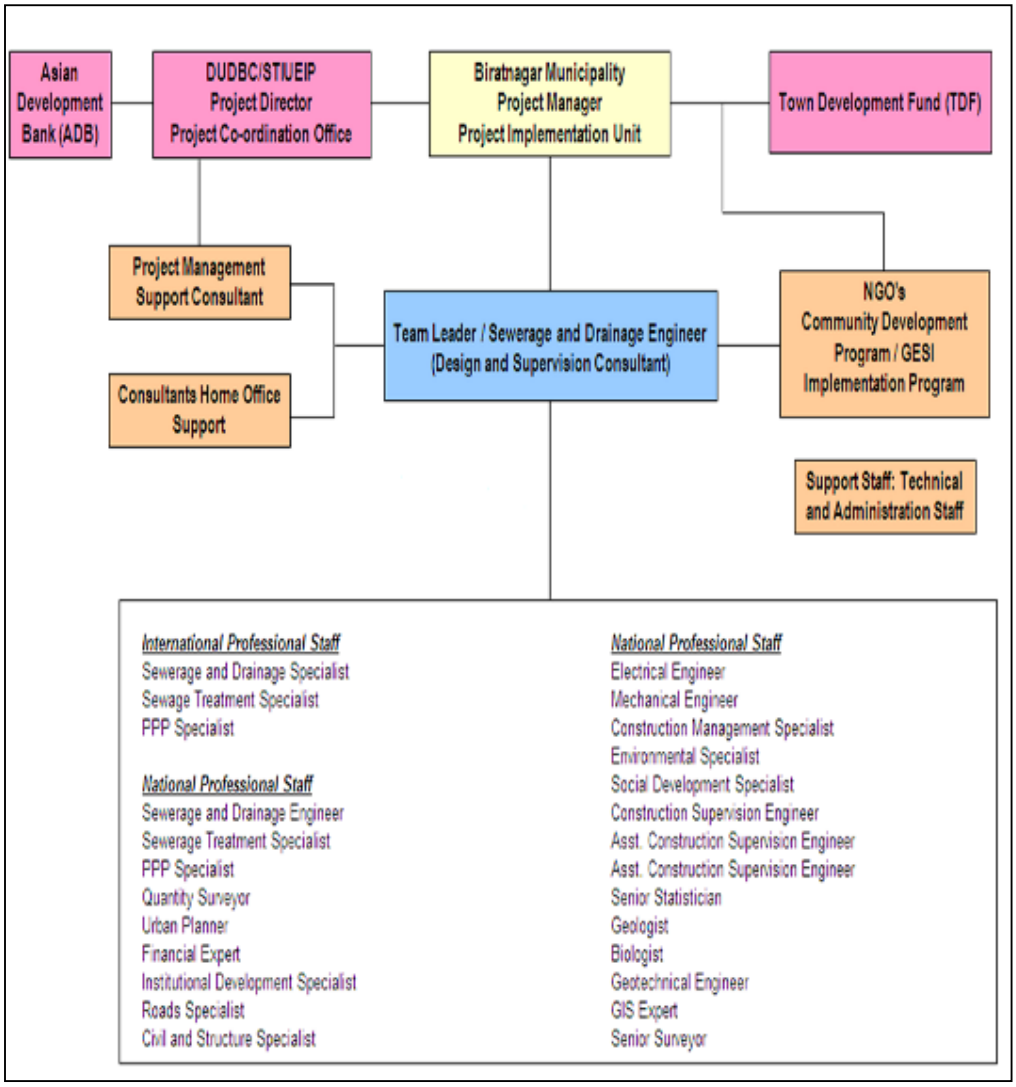


Figure 6: Organization and Staffing of STIUEIP, Biratnagar

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

Table 7: Agency-wise Financial Contribution to BSMC

Contributors	Amount (US$)	Amount (NRs.)	%
Government of Nepal (GoN)	5,960,256	524,502,513	16.00%
Asian Development Bank (ADB)	24,213,539	2,130,791,460	65.00%
Biratnagar Sub-Metropolitan City (BSMC)	2,980,128	262,251,257	8.00%
Town Development Fund (TDF)	4,097,676	360,595,478	11.00%

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	Mohan Kumar Tuladhar	Team Leader
2	Dil Bahadur Rana	Construction Supervision Engineer
3	Jay Prakash Yadav	Asst. Construction Supervision Engineer-1
4	Bhakta Raj Shakya	Asst. Construction Supervision Engineer-2
5	Bala Ram Mayalu	Social Development Specialist
6	Rajesh Yadav	Junior Engineeer-1
7	Sujan Shrestha	Junior Engineeer-2
8	Ashok Kafle	Junior Engineeer-3
9	Santosh Dahal	Junior Engineeer-4
10	Saroj Bhattrai	Junior Engineeer-5
11	Santosh Yadav	Office Manager (from 18 April 2015)
12	Ramji Gimire	Driver-1
13	Suman Ghimire	Driver-2
14	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 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. Prepare Variations Order

xi. Maintain correspondences with the Employer and the Contractor

xii. Assist to PIU

6.10 KEY DATES

The consultant has noted the following key dates for the month of May 2015

Table 9: Key dates of events /Activities:

S. No	Date	Activities/Events	Remarks
1	22 May 2015	Meeting at PCO, Kathmandu	Discussion on progress and situation after major earthquake occurred on 25th April and 12 May 2015. The contractor raised main issue for delay/lagging in progress is because of limited access to site. Request for material at site
2	25 May 2015	Meeting at ADB, Kathmandu	Discussion with BSMC, PIU, PCO, ADB, DSC and Contractor. BSMC agreed to provide cleared RoW by end of rainy season and or end of Dasai/Tihar festival. The meeting asked DSC to estimate of roadside drain and replacement of water supply pipe lines within sewer lines in Variation Order No 02.

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 31 May 2015						
S.N.	Location	Proposed Length (m)	Progress		Total to date (m)	Progress (%)
			Up to April 2015 (m)	This Month (m)		
1	B1	3,950.00	3,500.00	40.00	3,540.00	90%
2	B2	3,742.00	3,008.00	112.00	3,120.00	83%
3	B3	3,514.00	3,314.00	12.00	3,326.00	95%
4	S5	740.00	-	-	-	0%
5	S9	3,178.00	810.00	-	810.00	25%
6	S11	2,092.00	1,424.00	10.00	1,434.00	69%
7	S13	5,640.00	3,863.00	210.00	4,073.00	72%
8	CN2	2,273.00	2,131.00	85.00	2,216.00	97%
9	CN3	2,170.00	1,370.00	100.00	1,470.00	68%
10	Rani Area	8,483.00	1,651.00	780.00	2,431.00	29%
11	R2 (Rehab)	6,000.00	5,950.00	170.00	6,120.00	102%
	Total	**41,782.00**	**27,021.00**		**28,540.00**	68%

Note: There is increment in length of drain in R2 road and some length corrected to S13 from previous monthly progress report.

Table 11: Physical Progress in Sewer Lines: Till 31 May 2015

Physical Progress till 31 May 2015						
S.N.	Location	Proposed Length (m)	Progress		Total to date (m)	Progress (%)
			Up to April 2015 (m)	This Month (m)		
1	T1	10,912		-		0%
2	T2	27,128	4,323.00	3,07900	**7,402.00**	27.28%
3	T3	23,070	3,668.00	1,504.00	**5,172.00**	22.41%
4	T4	2,530		-		0%
	Total	**63,640**	**7,991.00**	**4,583.00**	**12.574.00**	**19.75%**

Table 12: Physical Progress in Manholes: Till 31 May 2015

S.N.	Description	Progress		Total to date (m)
		Up to April 2015 (m)	This Month (m)	
1	House Connection Chambers	96.00	0.00	**96.00**
2	Sewer Inlet	198.00	12.00	**210.00**
3	Manholes	210.00	212.00	**422.00**

Table 13: Physical Progress in Roads and Lanes: Till 31 May 2015

S.N.	Location	Proposed Length (km)	Progress		Total to date (m)	Progress (%)
			Up to April Month (m)	This Month (m)		
1	T1, T2,T3,T4 and R2	65.0	-	0		Installation of Kerbs /drain covers in progress. Shifting/ relocation of waters supply pipelines in progress
	Total	**65.0**				

Table 14: Physical Progress in Waste Water Component at WWTP, Jatuwa:

S.N.	Location	Description	Completed Items to Date	Progress in %
1	Jatuwa	Excavation of Anaerobic Pond	3 nos	**No Activities at WWTP Site in this month**
2	Jatuwa	Excavation of Facultative Pond	2 nos	
3	Jatuwa	River Training Work	480 m	
4	Jatuwa	Boundary Wall	580 m	
5	Jatuwa	Office Cum Lab Building		
6	Jatuwa	Workshop Building		
7	Jatuwa	Generator / Changing House		

Table 15: Physical Progress of Precast Concrete Works: Till 31 May 2015

S.N.	Location	Description	Up to April 2015	This Month	Total to date	Remarks
1	Katahari	Precast Slab	23,803	2,100	25,903	
2	Katahari	Precuts	3,853	212	4,065	
3	Katahari	Kerb Stone	5,812	0	5,812	

Table 16: Physical Progress of Hume Pipe (NP3): Production Detail

S.N.	Diameter (mm)	Pipes Required	Up to previous month, April	This Month	Total to date , May 2015	Pipes to produce (Balance)	Remarks
1	200		1,562	0	1,562		
2	300		152	14	166		
3	350		166	35	201		
4	400		199	34	233		
5	450		111	35	146		
6	500		248	40	288		
7	600		714	85	845		
8	700		947	125	1,072		
9	900		263	0	263		
10	1000		567	20	587		
11	1600		237	30	267		
	Total		**5,166**	**418**	**5,584**		

Contractor's Manpower:

Table 17: Contractor's key staffs:

Designation	No	Remarks
Project / Contract Manager	1	
Planning Engineer/Construction Engineer	1	
Construction Engineer	1	
Site Engineers	5	
Quality Control Manager	1	
Office/Bill Engineer	1	
Junior Engineer	10	
Sub Overseers	6	
Safety Manager / Senior Site Supervisor	1	
Accountant / Office Manager	1	
Lab Assistant	3	
Store Keeper	1	
Light Drivers	6	
Machine Operator	14	
Site Supervisor	5	
Other Supporting Staff	18	
Skilled Labour at Site	40	M:32; F:8
Unskilled Labour at Site	135	M:115; F:20
Total Labour	175	

Contractor's Equipment:
Table 18: Contractor's Equipment:

Equipment	No	Remarks
Back Hoe JCB	8	
Loader	3	
Excavator	5	
Excavator with Long Boom	1	
Plate Compactor	2	
Concrete Mixer	6	
Concrete Batching Plant	1	
Kerb Stone Machine	1	
Trailer	2	
Transit Mixer	2	
Water Bowser	1	
Steel Cutter	4	
Dumping Tractor	8	
Monkey Jumper	1	
Needle Vibrator	8	
Tipper	17	
Total Station	1	
Level Machine	6	
Jeep	6	
Motor Bike	10	
Asphalt Plant	1	
Asphalt Paver	1	
Crane	1	
Tractor	9	
Concrete Transit Mixture	3	

7.2 Cumulative Progress (S Curve)

Contractor's Revised Cumulative Progress S-Curve

S – Curve

Item No.	Description	Amount (NRs)	Relative Weight in %	Year	2013	Year 2014												Year 2015												Year 2016				
				Month	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	Preliminary and General Works	18,850,000.00	0.795	Program	0.000	0.326	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.119
				Achieve	0.000	0.326	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	Civil Works	1972,492,008.90	93.08	Program	0.000	0.005	0.508	0.369	0.295	1.811	1.509	0.100	0.384	0.408	0.150	3.293	4.549	5.859	7.607	7.454	7.513	6.078	5.050	1.742	1.503	0.000	0.000	3.366	6.413	9.047	8.446	6.788	2.617	0.000
				Achieve	0.000	0.005	0.508	0.369	0.295	1.811	1.509	0.100	0.384	0.408	0.150	3.293	1.136	1.787	3.661	15.281	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	Electro-mechanical Works	18,884,000.00	0.89	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.365	0.438	0.088	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	Provisional Items and Provisional Sum	63,741,517.00	3.01	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.196	0.196	0.196	0.196	0.196	0.196	0.196	0.196	0.063	0.063	0.063	0.196	0.196	0.196	0.197	0.197	0.063	
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.068	0.068	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	Operation & Maintenance Equipment and Machineries	34,450,000.00	1.63	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.813	0.813	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	Laboratory Equipment	6,000,000.00	0.28	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.174	0.109
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	Operation and Maintenance	6,000,000.00	0.28	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.283
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	Daywerks	637,000.00	0.03	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Total	2,139,054,525.90	100.00																															
Original Program	% age				0.347	0.074	3.181	6.282	7.931	3.017	2.219	1.212	0.476	2.710	3.643	3.662	3.700	4.435	4.401	4.460	4.456	4.401	3.802	1.168	3.018	3.658	4.413	3.645	3.597	4.707	4.728	3.150	2.891	0.616
	Cumulative % age				0.347	0.421	3.601	9.884	17.814	20.831	23.050	24.262	24.738	27.448	31.091	34.754	38.454	42.889	47.290	51.750	56.206	60.607	64.409	65.577	68.595	72.253	76.666	80.310	83.907	88.614	93.342	96.492	99.383	100.00
Revised Program-1	% age				0.005	0.550	0.559	0.521	2.288	6.606	4.806	1.003	0.183	0.576	1.416	8.074	9.810	9.883	10.666	10.056	9.725	9.865	7.445	2.284	0.247	0.159	0.145	0.145	0.145	0.145	0.079	0.601	1.227	0.787
	Cumulative % age				0.005	0.555	1.114	1.635	3.924	10.530	15.336	16.339	16.522	17.098	18.514	26.587	36.397	46.280	56.946	67.002	76.727	86.593	94.037	96.321	96.567	96.726	96.871	97.016	97.161	97.306	97.386	97.986	99.213	100.00
Revised Program-2	% age				0.000	0.331	0.520	0.381	0.307	1.823	1.521	0.113	0.397	0.421	0.162	3.305	4.760	6.070	8.630	8.478	7.724	6.654	5.699	2.040	1.581	0.079	0.079	3.577	6.643	9.257	8.857	7.000	3.002	0.577
	Cumulative % age				0.000	0.331	0.851	1.232	1.540	3.363	4.883	4.996	5.393	5.813	5.975	9.281	14.040	20.110	28.740	37.218	44.942	51.596	57.295	59.335	60.916	60.995	61.074	64.650	71.294	80.551	89.408	96.407	99.410	100.0
Achievement	% age				0.000	0.331	0.520	0.381	0.307	1.823	1.521	0.113	0.397	0.421	0.162	3.305	1.148	3.139	3.742	4.560	3.200	2.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cumulative % age				0.000	0.331	0.851	1.232	1.540	3.363	4.883	4.996	5.393	5.813	5.975	9.281	10.429	13.568	17.310	21.870	25.070	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670

Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi

Figure 7: S- Curve of Physical Progress

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 May, 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 GUIDELINES 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. In 20th May, a consultation meeting held in ward no. 13 is significant for obtaining mass consensus on the sewerage line construction along the lanes of Araniko 'ka' and Araniko 'kha' TLOs. The meeting was organized in line with the planned methodology as agreed in Safeguard Desk meeting.

The project was planned to disseminate the information and message to community people about the project features, its purpose, and methods of use and functionality of infrastructure under construction by the project. The meeting was fruitful to provide prior information regarding the project construction activities before execution at the community level. It was 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 meeting with community people at Araniko HSS, Tin Tolia, Biratnagar, also provided an opportunity to obtain people's views and perception towards the project. Community people of that locality discussed extensively in the project features and provided some suggestions for efficient carryover of the project components and assured cooperation and coordination in the project execution in their localities.

Social Development Chief (SDC) of PIU (the Client), SDS and ACSE from DSC (the Consultant), Engineer from Contractor actively participated in the meeting. SDS/DSC and SM/CDP facilitated the consultation meeting, support to prepare meeting minute and obtain decisions. **(*Meeting Minute in Annex*)**

Apart from of this, many field visits, observations and consultation meetings 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.

On 18th May 2015, a regular meeting of the social safeguard desk reviewed the ADB mission visit focusing on the project social safeguard issues. The desk reviewed the visit outputs and the purpose of the visit that was to address some public complains of Biratnagar regarding on the road, drainage construction and sewerage pipe laying works in the project area. The meeting perceived the visit as a social assessment in terms of resettlement compliance, community development programs and social safeguard effectiveness. (Meeting Minute in Annex 6)

- **ROAD/LANE IMPROVEMENT IN AFFECTED COMMUNITY**

39. According to the decision made during the 5th meeting of the Safeguard Desk, four schemes on road/lane improvement were approved through small facilities of community development program (CDP) in ward no. 18. The project affected community as indicated in resettlement plan (RP) were given priority. The Users Committees (UCs) were formed and separate agreements were made between UCs and project authority. The work has been started. The facilities addressed the people's demand of that area which matches the community development criteria being facilitated and implemented by NGO

- **Gender and Social Inclusion (GESI) Sensitization Training**

40. The project has been envisaged a 'GESI Sensitization Training' 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 to conduct GESI training relating to urban infrastructure development to staff of municipality, municipal steering committee, PIUs, 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 within next month.

Safeguard desk members discussed and reviewed the proposed GESI sensitization training proposal. Social Development Specialist (SDS) of DSC reviewed the detail proposal and adjusted budget accordingly for the training. The training arrangement will be decided after the approval of this proposal by the project authority. Primarily it will be a 3- day training focusing mainly on GESI sensitization comprising other project elements. About 35 participants from Biratnagar Sub Metropolitan City (BSMC) office and project staffs and will be provided this training.

- **UPDATE OF SMALL FACILITIES CONSTRUCTION AND OTHER ACTIVITIES IN CDP/STIUEIP**

41. 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.

On 10th May, the SDS of DSC attended a meeting held for formation of a users committee (UC) at Ward 18, Sarswoti Tole. It was a mass meeting of the community members and it formed a users committee (UC) for Road/Lane Improvement under small facilities construction in the Community Development Program (CDP) of STIUEIP Biratnagar. The SDS briefed his view in the meeting in a way to make the users committee more inclusive and participatory in terms of gender equality and social inclusion (GESI). Two Users' Committees (UCs) were formed on that day in the meeting with around 40% women in UCs.

- **Employment in Project**

42. The core activities of the project i.e. sewerage pipe laying, drain construction and road/ lane improvement have provided employment to more than 300 persons in a day. The employed human resources varied from skilled engineer/ project manager to general labourer, supervisor, (sub) overseers and mechanics. However, a very few women (16%) are working in the construction activities as skilled and unskilled labourer but they are paid equal to men for similar type of work. The contractor has been suggested to increase the work opportunity to women in different types of works. Four women Assistant Sub Engineer are working at the sites after completing OJT (on the job training) successfully from different CTEVT affiliated institutes of nearby districts..

- **General**

43. 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 May 2015.

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

44. Following are the key issues affected in progress:

- Limited site possession and access to site within Right of Way (RoW)

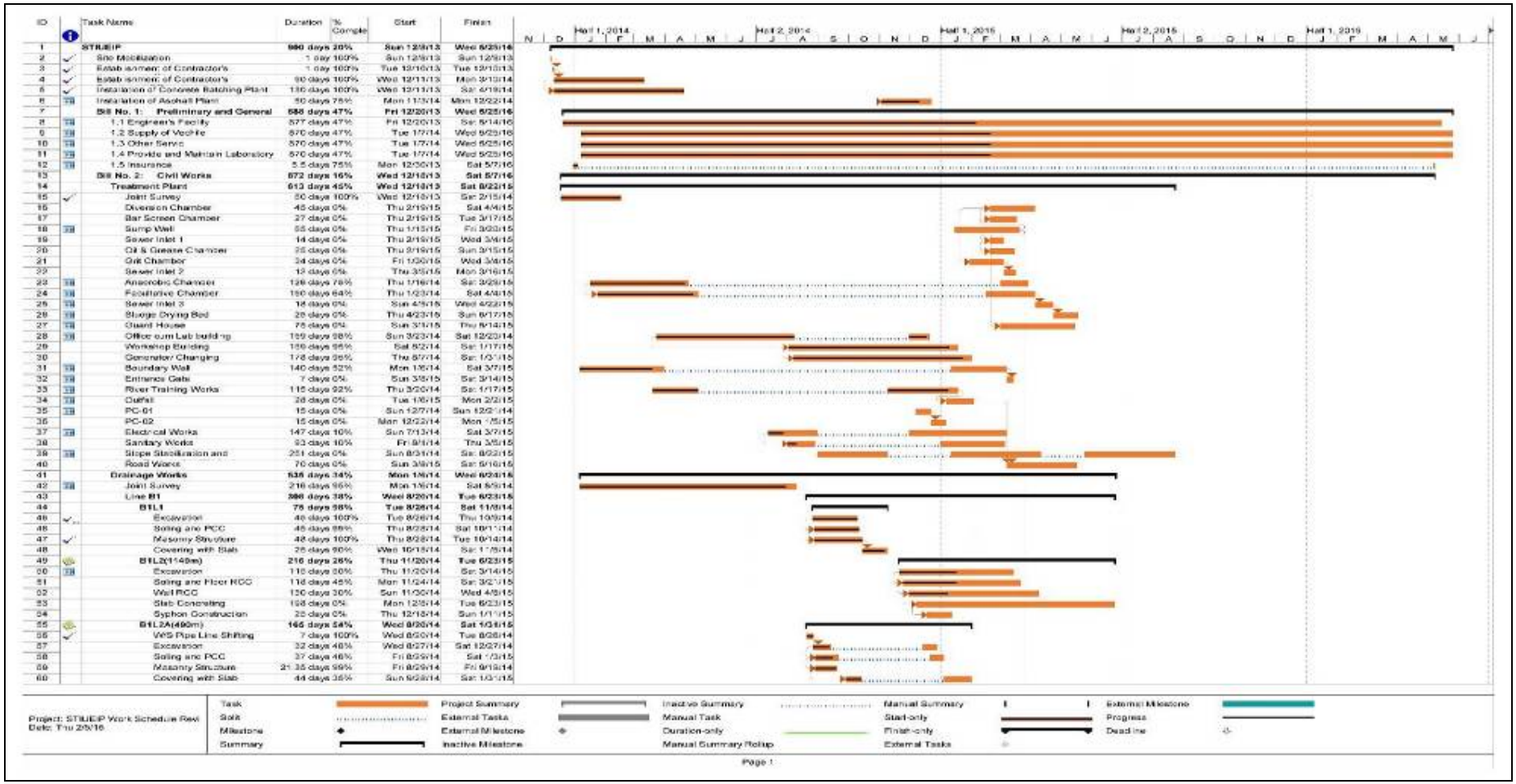
- Contractor is lacking with qualified and experienced technical personnel, especially engineers (Civil, Sanitary, Electromechanical and Road Engineer).
- Unexpected rainfall at frequent interval has interrupted works, especially sewer works for deep trench excavation, laying of pipes and construction of manholes, sewer inlets and house connection chambers..
- The second major Earthquake of 6.8 Richter Magnitude Scale occurred on 12 May 2015. This devastating earthquake has hampered/disturbed human resources in the project. Many staffs are concerned with their home and properties and demobilized. But the critical activities are in progress despite the reduced/diminished workforce.
- Shifting of electrical poles, transformers and telephone lines are in progress with very slow pace. This is one if the main cause which has directly impacted road works progress.
- The Employer/BSMC has decided to relocate the pipes for R2 road with Mangadh Water Supply Project only (about 1 km on both sides) and this is complete now. But, the other section from canal crossing to Panitanki, Nepal Water Supply Corporation and the Contractor has started to relocate and this may take another couple of weeks.

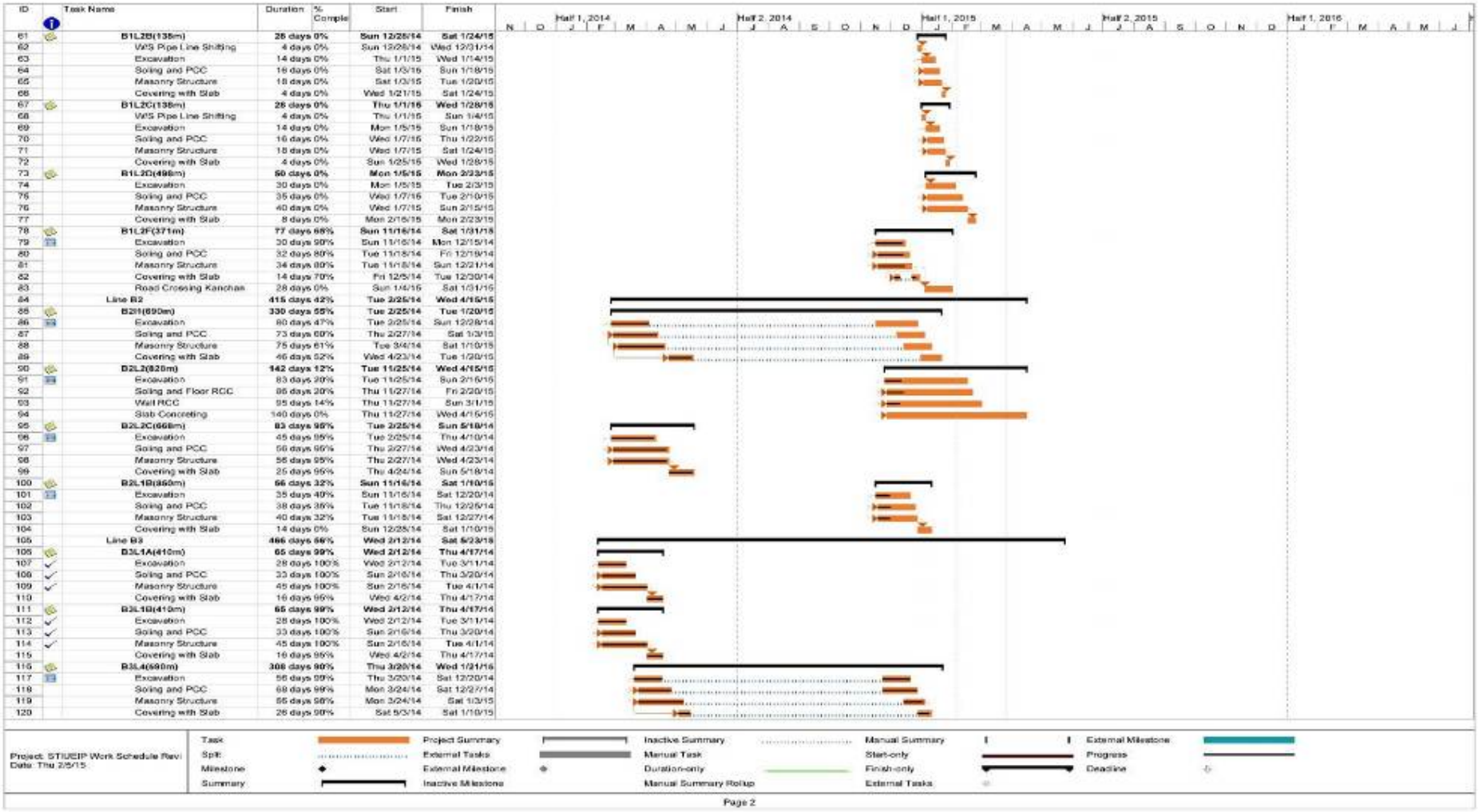
10 WORK PLAN FOR THE NEXT MONTH

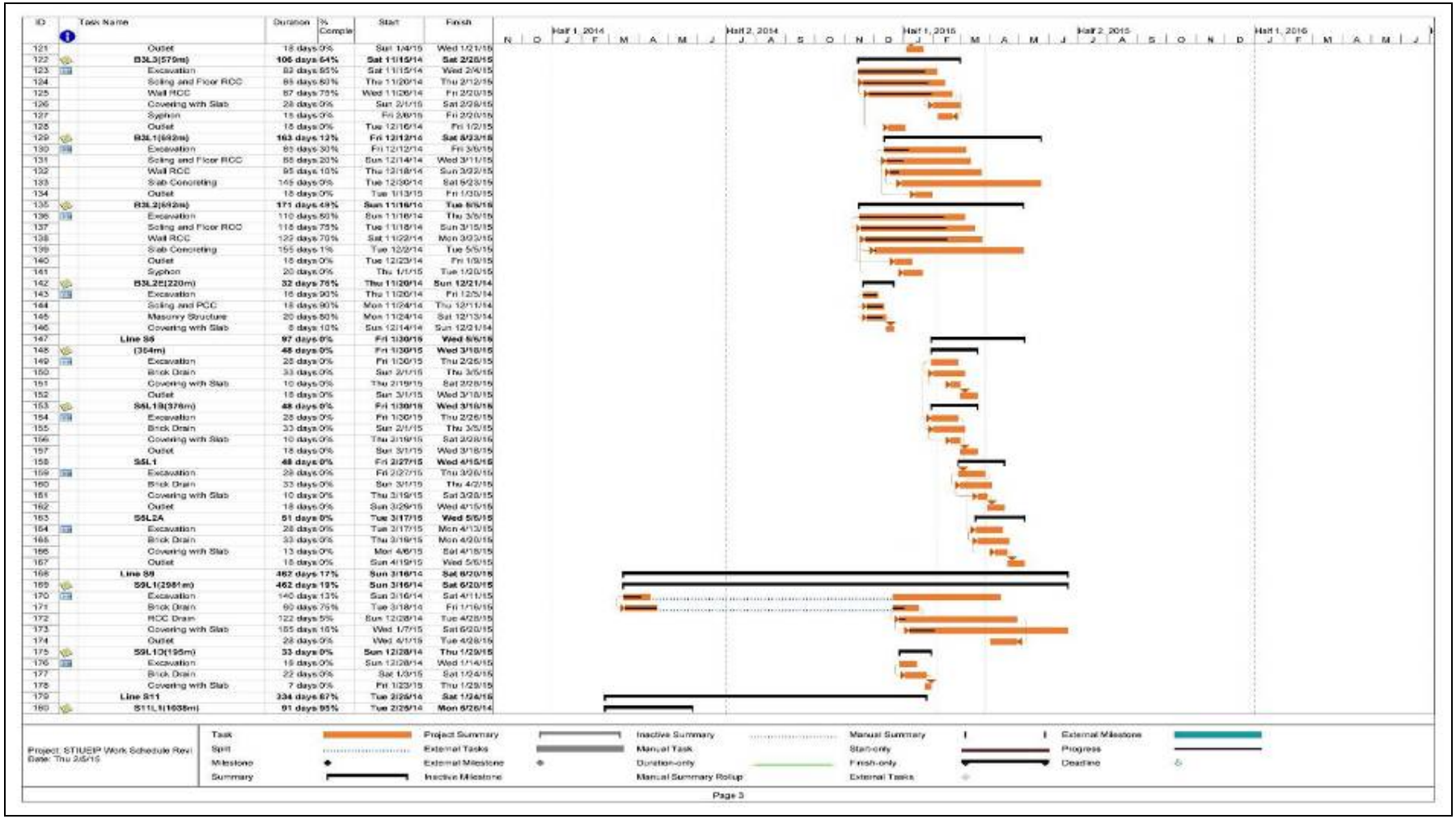
45. Following are the Contractor's works in the next month **(Please refer to the contractor's progress report for quantitative plan works for next month):**
    - Continuation of storm water drains- B1, B2, CN2, CN3, S11, S13 at critical locations and sections.
    - Continuation of sewer pipe lines T2 and T3 Trunk Line and Secondary Lines including manholes, sewer inlet chambers and house connecting chambers at critical sections.
    - If weather permits, then R2 road will be started.
    - Production of precast RCC items (Hume pipe, kerb stone, chamber, manhole, drain cover slab etc)
    - Suitability tests and routine tests of construction materials at Lab and at site

ANNEX-1: Work Schedule (Rev.02) (Under Review) and Progress

Note: Please refer to the contractor's progress report for detail and complete work program.




ID
Task Name
Duration
% Comple
Start
Finish
Half 1, 2014
Half 2, 2014
Half 1, 2015
Half 2, 2015
Half 1, 2016
61 B1L2B(135m) 26 days 0% Sun 12/28/14 Sat 1/24/15
62 WS Pipe Line Shifting 4 days 0% Sun 12/28/14 Wed 12/31/14
63 Excavation 14 days 0% Thu 1/1/15 Wed 1/14/15
64 Soling and PCC 16 days 0% Sat 1/3/15 Sun 1/18/15
65 Masonry Structure 18 days 0% Sat 1/3/15 Tue 1/20/15
66 Covering with Slab 4 days 0% Wed 1/21/15 Sat 1/24/15
67 B1L2C(138m) 28 days 0% Thu 1/1/15 Wed 1/28/15
68 WS Pipe Line Shifting 4 days 0% Thu 1/1/15 Sun 1/4/15
69 Excavation 14 days 0% Mon 1/5/15 Sun 1/18/15
70 Soling and PCC 16 days 0% Wed 1/7/15 Thu 1/22/15
71 Masonry Structure 18 days 0% Wed 1/7/15 Sat 1/24/15
72 Covering with Slab 4 days 0% Sun 1/25/15 Wed 1/28/15
73 B1L2D(498m) 50 days 0% Mon 1/5/15 Mon 2/23/15
74 Excavation 30 days 0% Mon 1/5/15 Tue 2/3/15
75 Soling and PCC 35 days 0% Wed 1/7/15 Tue 2/10/15
76 Masonry Structure 40 days 0% Wed 1/7/15 Sun 2/15/15
77 Covering with Slab 8 days 0% Mon 2/16/15 Mon 2/23/15
78 B1L2F(371m) 77 days 68% Sun 11/16/14 Sat 1/31/15
79 Excavation 30 days 90% Sun 11/16/14 Mon 12/15/14
80 Soling and PCC 32 days 80% Tue 11/18/14 Fri 12/19/14
81 Masonry Structure 34 days 80% Tue 11/18/14 Sun 12/21/14
82 Covering with Slab 14 days 70% Fri 12/5/14 Tue 12/30/14
83 Road Crossing Kanchan 28 days 0% Sun 1/4/15 Sat 1/31/15
84 Line B2 415 days 42% Tue 2/25/14 Wed 4/15/15
85 B2I(690m) 330 days 55% Tue 2/25/14 Tue 1/20/15
86 Excavation 80 days 47% Tue 2/25/14 Sun 12/28/14
87 Soling and PCC 73 days 60% Thu 2/27/14 Sat 1/3/15
88 Masonry Structure 75 days 61% Tue 3/4/14 Sat 1/10/15
89 Covering with Slab 46 days 52% Wed 4/23/14 Tue 1/20/15
90 B2L2(828m) 142 days 12% Tue 11/25/14 Wed 4/15/15
91 Excavation 83 days 20% Tue 11/25/14 Sun 2/15/15
92 Soling and Floor RCC 86 days 20% Thu 11/27/14 Fri 2/20/15
93 Wall RCC 95 days 14% Thu 11/27/14 Sun 3/1/15
94 Slab Concreting 140 days 0% Thu 11/27/14 Wed 4/15/15
95 B2L2C(668m) 83 days 95% Tue 2/25/14 Sun 5/18/14
96 Excavation 45 days 95% Tue 2/25/14 Thu 4/10/14
97 Soling and PCC 56 days 95% Thu 2/27/14 Wed 4/23/14
98 Masonry Structure 56 days 95% Thu 2/27/14 Wed 4/23/14
99 Covering with Slab 25 days 95% Thu 4/24/14 Sun 5/18/14
100 B2L1B(860m) 66 days 32% Sun 11/16/14 Sat 1/10/15
101 Excavation 35 days 40% Sun 11/16/14 Sat 12/20/14
102 Soling and PCC 38 days 35% Tue 11/18/14 Thu 12/25/14
103 Masonry Structure 40 days 32% Tue 11/18/14 Sat 12/27/14
104 Covering with Slab 14 days 0% Sun 12/28/14 Sat 1/10/15
105 Line B3 466 days 66% Wed 2/12/14 Sat 5/23/15
106 B3L1A(410m) 65 days 99% Wed 2/12/14 Thu 4/17/14
107 Excavation 28 days 100% Wed 2/12/14 Tue 3/11/14
108 Soling and PCC 33 days 100% Sun 2/16/14 Thu 3/20/14
109 Masonry Structure 45 days 100% Sun 2/16/14 Tue 4/1/14
110 Covering with Slab 16 days 96% Wed 4/2/14 Thu 4/17/14
111 B3L1B(410m) 65 days 99% Wed 2/12/14 Thu 4/17/14
112 Excavation 28 days 100% Wed 2/12/14 Tue 3/11/14
113 Soling and PCC 33 days 100% Sun 2/16/14 Thu 3/20/14
114 Masonry Structure 45 days 100% Sun 2/16/14 Tue 4/1/14
115 Covering with Slab 16 days 96% Wed 4/2/14 Thu 4/17/14
116 B3L4(690m) 308 days 90% Thu 3/20/14 Wed 1/21/15
117 Excavation 56 days 99% Thu 3/20/14 Sat 12/20/14
118 Soling and PCC 68 days 99% Mon 3/24/14 Sat 12/27/14
119 Masonry Structure 55 days 98% Mon 3/24/14 Sat 1/3/15
120 Covering with Slab 26 days 90% Sat 5/3/14 Sat 1/10/15
Project: STUDIP Work Schedule Revi
Date: Thu 2/5/15
Task
Split
Milestone
Summary
Project Summary
External Tasks
External Milestone
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Progress
Deadline
Page 2


Project: STIUEP Work Schedule Revi
Date: Thu 2/5/15
Task
Split
Milestone
Summary
Project Summary
External Tasks
External Milestone
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Progress
Deadline
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ANNEX2: PHOTOGRAPHS - MAY 2015

RCC Storm Drain at B1

Laying of water supply pipe line at R2 road

Storm Drain at Rani Area , A part of Southern Storm Water Drainage System

Connection of Syphon and Storm Drain of CN3, near Sagarmatha H S School

Storm Drainage at of CN3, after canal crossing

Trench excavation of Trunk line at T3, Dharambandh Road

Production of Hume Pipes, Ø 1,600mm at Itahari

Syphon at Canal Crossing of B2 Storm Drainage System

ANNEX-3: FINANCIAL STATUS (DETAILS OF SUBMITTED INVOICES AND RECEIPT OF PAYMENTS WITH KEY DATES)

Invoice #	For Month	Invoice Amount including VAT		Received Amount		Remarks
Invoice 01	Advance	NRs. 9,866,160.40	USD 104,621.20	NRs. 9,866,160.40	USD 104,621.20	Received
Invoice 02	Inception Report	NRs. 1,947, 420.08	USD 52,721.00	Rs. 1,947, 420.08	USD 52,721.00	Received
Invoice 03	Jan +Feb, 2012-months Invoice	NRs. 2,387,262.11	USD 4, 243.15	NRs.2,329,310.81	USD 4, 243.15	Received
Invoice 04	March, 2012	NRs. 537,546.65	USD 2,276.95	NRs. 351,430.00	USD 2,276.95	Received
Invoice 05	April, 2012	NRs. 396,065.00		NPR 267,810.00		Received
Invoice 06	Vehicle Invoice	NRs. 8,000,000.00		NRs. 8,000,000.00		Received
Invoice 07	May- month Invoice	NRs. 502,324.55		NRs 250,860.00		Received
Invoice 08	June-month Invoice	NRs. 464,430.00		NRs 262,160.00		Received
Invoice09	Interim Report		USD 70,295.04		USD 70,295.04	Received

Invoice 10	Interim Report	NRs. 2,596,560.10		NRs 2,596,560.10		Received
Invoice 11	April-June,2012		USD 1,270.00		USD 1,270.00	Received
Invoice 12	July-month Invoice		USD 2,015.00		USD 2,015.00	Received
Invoice 13	Survey Invoice I	NRs. 2,166,775.00		NRs. 2,166,775.00		Received
Invoice 14	July-month Invoice	NRs. 669,751.00		NRs. 321,146.00		Received
Invoice 15	August month Invoice	NRs. 337,870.00	USD 0.00	NPR 314,140.00		Received
Invoice 16	September month Invoice	NRs. 328, 830.00	USD 3, 361.75	NRs. 314,140.00	USD 1,854.75	Received
Invoice 17	Survey Works Invoice II	NRs. 1,166,775.00		NRs. 1,166,775.00		Received
Invoice 18	Monthly Invoice Oct.12	NRs. 357,080.00	USD 2,895.00	NRs. 324,310.00	USD 2,895.00	Received
Invoice 19	Environmental Base line survey	NRs.144,634.35		NRs. 125,769.00		Received
Invoice 20	Monthly Invoice Nov.12	NRs. 331,090.00	US$. 4,407.00	NRs. 324,310.00	USD. 4,407.00	Received
Invoice 21	Monthly Invoice-Dec.2012	NRs. 449,175.00	US$ 1,909.70	Nrs. 350,865.00	USD 1,909.70	Received
Invoice 22	Draft Report Invoice	NRs. 5,193,120.21	US$140,590.08	NRs. 5,193,120.21	USD 91,587.31	Received

Invoice 23	Geotechnical Investigation Invoice	NRs. 191,741.23		NRs.166,731.00		Received
Invoice 24	Vehicle hard top Invoice	NRs. 707,125.70		NRs. 707,125.70		Received
Invoice 25	Monthly Invoice Jan13	NRs. 410,868.00	USD 4,327.90	NRs. 380,923.00	USD 3103.40	Received
Invoice 26	Monthly Invoice Feb13	NRs.324,310.00	USD 3,051.00	NRs.324,310.00	USD 2,203.50	Received
Invoice 27	Monthly Invoice Mar 13	NRs. 404,467.68	USD 4553.90	NRs. 361,600.00	USD 4553.90	Received
Invoice 28	Final Report Invoice	NRs. 3,245,700.13	USD 87,868.80	NRs. 3,245,700.13	USD 85,350.48	Received
Invoice 29	Monthly Invoice April 13	NRs. 340,695.00	USD 1,322.10	NRs. 324,310.00	USD 881.40	Received
Invoice 30	Monthly Invoice May 13	NRs. 671,951.00	USD 4,4435.25	NRs. 576,700.02	USD 4,4435.25	Received
Invoice 31	Monthly Invoice June 13	NRs. 1,107,583.06	USD 2,203.50	NRs.448,376.81	USD 2,203.50	Received
Invoice 32	Additional Survey	NRs. 1,050,052.00				Not received
Invoice 33	Monthly Invoice July 13	NRs. 589,490.49	USD 1,542.45	NRs 481,693.01	USD 1,101.75	Received
Invoice 34	Monthly Invoice August 13	NRs. 701,094.94	USD 00.00	NRs 629,499.89	USD 0.00	Received

Invoice 35	Monthly Invoice Sept. 13	NRs. 424,773.78	USD 00.00	NRs 424,772.45	USD 0.00	Received
Invoice 36	Monthly Invoice Oct. 13	NRs. 458,661.35	USD 00.00	NRs 408,710.78	USD 0.00	Received
Invoice 37	Monthly Invoice Nov. 13	NRs. 450,085.78	USD 0.00	NRs 431,600.15	USD 0.00	Received
Invoice 38	Monthly Invoice Dec. 13	NRs. 501,084.94	USD 00.00	NRs 481,693.01	USD 0.00	Received
Invoice 39	Monthly Invoice Jan. 2014	NRs. 695,501.44	USD 00.00	NRs. 609,960.44	USD 0.00	Received
Invoice 40	Monthly Invoice Feb. 2014	NRs. 613,180.94	USD 00.00	NRs. 613,180.94	USD 0.00	Received
Invoice 41	Monthly Invoice Mar. 2014	NRs.1,308,022.46	USD 00.00	NRs. 961,794.30	USD 0.00	Received
Invoice 42	Monthly Invoice Apr. 2014	NRs. 861,039.32	USD 00.00	NRs. 812,918.13	USD 0.00	Received
Invoice 42	Geotechnical Inv. II	NRs. 549,989.85	USD 00.00	NRs. 546,232.96	USD 0.00	Received
Invoice 43	Monthly Invoice May 2014	NRs. 1,170,291.64	USD 00.00	NRs. 1,119,306.04	USD 0.00	Received
Invoice 44	Monthly Invoice June 2014	NRs.1,163,214.09	USD19,313.42	NRs. 1,098,669.08	USD 0.00	Received
Invoice 45	Monthly Invoice July 2014	NRs. 854,199.00	USD18,465.92	NRs. 812,253.40	USD 0.00	Received

Invoice 46	Monthly Invoice August 2014	NRs 865,951.00	USD 0.00	NRs. 819,485.40	USD 0.00	Received
Invoice 47	Monthly Invoice September 2014	NRs 777,343.07	USD 0.00	NRs. 647,031.02	USD 0.00	Received
Invoice 48	Monthly Invoice October 2014	NRs 841,778.13	USD 0.00	NRs. 736,326.53	USD 0.00	Received
Invoice 49	Monthly Invoice November 2014	NRs 1,306,536.89	USD 0.00	NRs. 1,020,026.24	USD 0.00	Received
Invoice 50	Monthly Invoice December 2014	NRs 1,348,791.74	USD 0.00	NRs. 1,192,968.59	USD 0.00	Received
Invoice 51	Monthly Invoice Jan 2015	NRs 1,255,351.08	USD 0.00	NRs. 1,184,301.04	USD 0.00	Received
Invoice 52	Monthly Invoice Feb 2015	NRs 1,319,642.66	USD 0.00	NRs. 1,033,834.74	USD 0.00	Received
Invoice 53	Monthly Invoice Mar 2015	NRs 2,414,019.91	USD 0.00	NRs. 1,795,604.58	USD 0.00	Received
Invoice 54	Monthly Invoice Apr 2015	NRS 1,483,793.91	USD 0.00			Not Received

ANNEX-4: STATUS OF ACTIONS AGREED WITH PREVIOUS ADB LOAN REVIEW MISSION

S. No.	Agreed Items in ADB Review Mission with DSC on 2-4 December 2014	Status	Responsibility
1	Updated Semi-Annual Resettlement and Social Aspect Report	Report Submitted on 14 January 2015	DSC/PMSC
2	DSC will review its construction supervision plan (including international experts inputs) against the contractors approved scheduled and submit it to PIU.	Draft Plan submitted	DSC
3	Submission of implementation status of EMP to ADB in quarterly basis	Report Submitted till December, 2014	DSC/PMSC

ANNEX-5: PROFESSIONAL INPUT AS PER CONTRACT VS INPUT USED TILL THIS REPORTING PERIOD

S.No.	Expert / Position	Total man months Input (as per agreement)			Man months Used in 2012/013/014/2015			Balance
A	Professional Staff	Design	Construction	Total	Up to April 2015	May 2015	Total	
A1	**International Professional Staff**				Up to April 2015	May 2015	Total	

S.No.	Expert / Position	Total man months Input (as per agreement)			Man months Used in 2012/013/014/2015			Balance
1	Sewerage and Drainage Engineer	8	4	12	7.37	0.00	7.37	4.63
2	Sewage Treatment Specialist (1 day at May, 2014)	5	4	9	6.01	0.00	6.01	2.99
3	PPP Specialist	2		2	2.00	0.00	2.0	0.00
A2	**Domestic Professional Staff**				**Up to April 2015**	**May 2015**	**Total**	**Balance**
4	Team Leader/ S-D Engineer	12	24	36	29.23	1.00	30.23	6.77
5	Sewage Treatment Specialist	8	18	26	11.00	0.00	11.0	15.00
6	Procurement Specialist	5	2	7	8.75	0.00	8.75	(1.75)
7	DTL/ Quantity Surveyor	9		9	10.00	0.00	10.0	(1.00)
8	Urban Planner	4	2	6	5.00	0.00	5.0	1.00
9	Financial Expert	5		5	6.00	0.00	6.0	(1.00)
10	Institutional Development Specialist	2	3	5	2.00	0.00	2.0	3.00
11	PPP Specialist	3		3	3.00	0.00	3,0	0.00

S.No.	Expert / Position	Total man months Input (as per agreement)			Man months Used in 2012/013/014/2015			Balance
12	Roads Specialist	4	8	12	7.00	0.00	7.00	5.00
13	Civil and Structural Specialist	6	2	8	7.95	0.00	7.95	0.05
14	Electrical Engineer	3	1	4	3.50	0.00	3.50	0.50
15	Mechanical Engineer	3	1	4	3.90	0.00	3.90	0.10
16	Construction Management Specialist		10	10	0.83	0.00	0.83	9.17
17	Environmental Specialist	8	12	20	14.09	0.50	14.59	5.41
18	Social Development Specialist	8	15	23	18.00	1.00	19.00	400
19	Construction Supervision Engineer		30	30	16.00	1.00	17.00	13.00
20	Asst. Construction S Engineer- 1		30	30	10.50	1.00	11.50	18.50
	Asst. Construction S Engineer- 2		30	30	12.70	1.00	13.70	16.30
21	Senior Statistician	4		4	4.00	0.00	4.00	0.00
22	Geologist	1		1	1.00	0.00	1.00	0.00
23	Biologist	1		1	1.00	0.00	1.00	0.00
24	Geo-technical Engineer	1		1	2.40	0.00	2.40	(1.40)

S.No.	Expert / Position	Total man months Input (as per agreement)			Man months Used in 2012/013/014/2015			Balance
25	GIS Expert	2		2	4.00	0.00	4.00	(2.00)
26	Senior Surveyor	2		2	2.00	0.00	2.00	0.00
	Network Modular				8.00	0.00	8.00	(8.00)
	Hydrologist				4.00	0.00	4.00	(4.00)
A-3	Support Staff							
27	Junior Engineer-1			49	40.00	1.00	41.00	8.00
	Junior Engineer-2			49	40.00	1.00	41.00	8.00
	Junior Engineer-3			24	7.00	1.00	8.00	16.00
	Junior Engineer-4			49	3.33	1.00	4.33	46.67
	Junior Engineer-5			49	0.70	1.70	1.70	48.30
	CAD Operators			20	0.00	0.00	0.00	20.00
28	Accountant / Office Manager			49	40.00	1.00	41.00	8.00
29	Secretary / Computer Operator			49	38.75	1.00	39.25	9.25
30	Driver-1			49	33.27	1.00	34.27	14.73

S.No.	Expert / Position	Total man months Input (as per agreement)			Man months Used in 2012/013/014/2015			Balance
	Driver-2			49	32.10	1.00	33.10	15.90
30	Office Assistant			49	39.50	1.00	40.50	8.50

ANNEX-6: MINUTES OF MEETING – MAY 2015

List of Minute of Meeting

1. Minutes of Meeting No 07- Safeguard Desk, 18 May 2015

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP) Biratnagar

Meeting of Safeguard Desk

Venue : Project Implementation Unit (PIU), Biratnagar
Date : May 18, 2015
Time : 10:30-12:00

Participants:

Upendra Prasad Baral- Project Manager/ STIUEIP, Biratnagar

Punam Kumar Dahal- Chief, Social Development/ PIU, STIUEIP Biratnagar

Noor Jang Thapa- Team Leader/ CDP, STIUEIP

Bala Ram Mayalu- Social Development Specialist/ DSC, STIUEIP

Discussion and Decisions

The following note summarizes major topics deliberated during the meeting and the decision reached.

S. No.	Agenda	Discussions and Decisions
1.	Review of ADB NRM visit	The 7th meeting of Safeguard Desk/ STIUEIP Biratnagar held as a regular monthly meeting with review of previous decisions and discussions on additional agendas. SDS/DSC shared the meeting about ADB Nepal Resident Mission (NRM) visit of 24-25 April. The team was comprised with Ms. Laxmi Sharma (Senior Project Officer / ADB), Mr. Laxmi P. Subedi (Social Safeguard Specialist/ ADB), Mr. Parag Kayastha (Dy. Project Director/ PCO) and Mr. Rajendra Pandit (Social Development Specialist/ PMSC). The visiting team met all the project stakeholders and visited core project activities and community development programs to observe the construction progress and interact with local people and stakeholders. The objective of the visit as described by the team was to observe the real situation of social safeguard initiatives in the project. The purpose of the visit was also to address some public complains of Biratnagar regarding on the road, drainage construction and sewerage pipe laying works in the project area. It was a social assessment in terms of resettlement compliance, community development programs and social safeguard effectiveness. As presented by the team the other objective of the visit was to see the scope of future investment, potential programs and preparedness for such perspective/ scopes. Mr. Subedi (Social Safeguard Specialist/ ADB NRM) of visiting team briefed about their concerns in safeguard policy, communication policy and Grievance Redress & Handling Policy of Asian Development Bank (ADB) in terms of STIUEIP Biratnagar project activities. He also made aware to project stakeholders on the Accountability Mechanism of ADB in the meeting. In

		response to the visiting team, the project has to incorporate some issues/ concerns in the next Semi Annual Update of Resettlement Plan and Due Diligence report if needed.
2.	Community Consultations	As the project has been planned to disseminate the information and message to community people about the project features, its purpose, and methods of use and functionality of infrastructure under construction by the project. It is also to provide prior information in project construction activities before execution at the community. In this context, two communities have been identified for such consultation meetings through respective Tole Lane Organizations (TLOs) within this month. A meeting is fixed for 20th May at *Ram Marga (T2 L18 Q), Sombare Hatiya Tole, Ward no. 13, BSMC*. SDS of DSC informed the meeting about this consultation and requested all to participate. The meeting decided to attend in the consultation and active participation. Engineers from DSC and contractor will be requested to present in the meeting. SDS/DSC and SM/CDP will facilitate the consultation meeting, support to prepare meeting minute and obtain decisions.
3.	GESI training	The potential participants of the proposed GESI sensitization training will be about 35 nos. instead of 30 as previously envisaged. All ward secretary/BSMC (22 nos.), section chiefs (10 nos.) of BSMC office, 1 from CDP/NGO, 1 from contractor and 1 from TLO have been considered. Officials and concerned staffs of PIU, SDS/DSC, TL/CDP and distinguished person of BSMC will be organizers, observers and facilitators. The proposed budget will be revised accordingly.
4.	Update of CDP/ Skill development trainings	TL/ CDP and SDC/PIU shared the status of skill development trainings. TL/CDP emphasized the needs and appropriateness of some kind of trainings; i.e. mushroom production. He also informed the meeting about the health and sanitation trainings planned for coming days. TL/CDP informed about the public toilet at PuspaLal Chowk which has already been started and seeks timely technical support from PIU. The planned women awareness training (2 nos) also has been completed during this period. Altogether 700 women (20 x 35 nos.) of targeted community benefitted by this type of training.

ANNEX-7: LABORATORY TEST RESULTS OF MAY 2015

ANNEX-8: CONTRACTOR'S PROGRESS REPORT- MAY 2015

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1 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
Completion Date	25th of May 2016
Contract Period	30 month
Contract amount with Provisional Sum	NRs 2,119,054,525.90
Add 13% VAT	NRs 272,278,000.00
Grand Total Contract amount with VAT&PS	NRs 2,391,332,525.90

2 Introduction

This Secondary Town Integrated Urban Environmental Improvement Project (STIUEIP), Sewerage and Drainage Network, Wastewater Treatment Plant and Lanes Improvement Subproject Biratnagar is funded by Asian Development Bank and Government of Nepal. The project area is in the Morang district, Biratnagar Sub-metropolitan City which lies in the Eastern Part of Nepal.

3 Sub-Project Components

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

- Sewerage and Drainage Network Subproject
  A separate system of storm water drainage and sewer line will be constructed at Biratnagar under this project.
- Wastewater Treatment Plant Subproject
  A Waste Water Treatment Plant (WWTP) will be constructed at Jatuwa, draining the wastewater finally to Singhiya River.
- Road and Lanes Improvement Subproject
  Existing road sections at different part of Biratnagar will be upgraded providing proper drainage facility.

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 those produced by the Employer.
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 Brief on procurement packages

The procurement procedures for construction material have already been started. Agreements have been made with the renowned factories for the procurement of Brick, Cement, Steel, uPVC, HDPE pipe, machinery and equipment, electrical components, manhole covers, rubber rings etc.

6 Details of the project execution

6.1 Physical Progress (Achievement till the month)

a) Storm Water Drain Sub-Project (Work Progress till the date)

Drain	Lines	Length	Total Length (m)	Drain Construction (m)				Remarks
				Till Previous Month	Till This Month	This Month Work	Plan for Next Month	
B1	B1L1	1198.98	3950	1,198.98	1,198.98	-		
	B1L2	1148.98		652.00	652.00	-	250.00	
	B1L2A	465.77		320.00	490.00	170.00		
	B1L2B	137.09		137.00	137.00	-		
	B1L2C	137.09				-		
	B1L2D	490.97		310.00	500.00	190.00		
	B1L2F	371.22		370.00	370.00	-		
						-		
B2	B2L1	1425	3742	1,063.00	1,063.00	-	150.00	
	B2L2	828.03		360.00	728.00	368.00	100.00	
	B2L2C	639.22		631.00	631.00	-		
	B2L1B	849.47		750.00	850.00	100.00		
						-		
B3	B3L1A	422.96	3514	420.96	420.96	-		
	B3L1B	421.1		421.10	421.10	-		
	B3L1	669.7		481.00	669.00	188.00		
	B3L2	691.56		436.00	481.00	45.00	100.00	
	B3L2E	220.42		200.00	200.00	-		
	B3L3	578.74		483.00	578.00	95.00		
	B3L4	509.5		509.50	509.50	-		
						-		
S9	S9L1	2981.85	3178	660.00	660.00	-		
	S9L1D	195.65				-		
						-		
S11	S11L1	794	1817	794.00	794.00	-		
	S11L1A	265.75		83.00	265.75	182.75		
	S11L1B	107.5		107.50	107.50	-		
	S11L2	650		434.00	650.00	216.00		
						-		
S13	S13L2	1001	4555	605.00	951.00	346.00	50.00	
	S131A	718.33		400.00	568.33	168.33	100.00	
	S13L1B	276		276.00	276.00	-		
	S13L1C	284		284.00	284.00	-		
	S13L1D	535.04		535.04	535.04	-		
	S13L1E	572.02		100.00	342.02	242.02	120.00	
	S13L1F	524		524.00	524.00	-		
	Hume Pip	645		447.50	545.00	97.50	50.00	
						-		
CN2	CN2L2	949.23	2273	915.00	915.00	-	120.00	
	CN2L1	994.5		245.00	325.00	80.00	120.00	
	CN2L1A	134.02				-		
	CN2L1B	195.27				-		
						-		
CN3	CN3L1	715.91	2170	590.00	715.91	125.91		
	CN3L2	997.5		325.00	475.00	150.00		
						-		
S5	S5L1A	364.07	740			-		
	S5L1B	376				-		
						-		
Rani	L5	630	7451	630.00	630.00	-		
	L1	204				-		
	L2	2032				-		
	L2J	426			200.00	200.00	150.00	
	L3	316		266.00	266.00	-		
	L4	2111		174.00	174.00	-		
	L4C	381		142.00	381.00	239.00		
	L4D	381			200.00		180.00	
	L6	970			250.00	250.00	250.00	
Road Side Drains	R2	4700	4700	3,370.00	3,520.00	150.00	200.00	
	R5	740	740		650.00	650.00	80.00	
	R64	121	121			-	121.00	
Total Length					**24,454.09**	**3,603.51**		

b) Sewerage Sub-Project (Work Progress till the date)

Sewer Line	Lines	Length	Total Length (m)	Sewer Construction (m)								Remarks
				Till Previous Month	Till This Month	This Month Work	Plan for Next Month	Total Manholes	Sewer Inlet	House Connections	uPVC Pipe	
T2 Trunk 1000 dia hume pipe			1729	547.50	1,152.00	604.50	600.00	22				
T2 Trunk 900 dia hume pipe			518	489.00	518.00	29.00		15				
T3 Trunk 700 dia hume Pipe			1472	660.00	1,027.00	367.00	400.00	30				
T3 Trunk 600 dia hume Pipe			1141		92.00	92.00	600.00					
Line T2L19 400 dia Hume Pip			487	300.00	300.00	-	100.00	10				
Line T2L19 500 dia Hume Pip			45	45.00	45.00	-		1				
Total length of Hume Pipe					3,134.00	1,092.50						
T2 Sec												
	19I				180.00	180.00		6				
	19b				242.00	242.00		8				
	19O				60.00	60.00		2				
	19R				108.00	108.00		4				
	19p				126.00	126.00		4				
	19e				156.00	156.00		5				
	19f			125.00	202.50	77.50		7				
	19g				72.00	72.00		2				
	19h			176.00	176.00	-		6				
	19i				180.00	180.00		6				
	19j			360.00	360.00	-		12	24.00	12.00		
	19k		17167		168.00	168.00		6				
	19mb				225.15	225.15		8				
	19o				112.00	112.00		4				
	19q			229.00	229.00	-		8				
	19s			262.00	262.00	-		9				
	19r			257.00	257.00	-		9				
	19t			175.00	175.00	-		6		18.00	145.00	
	24A			263.00	263.00	-		13	20.00	4.00		
	23			236.00	236.00	-		8	6.00			
	22			268.00	268.00	-		9	10.00			
	18P			152.00	152.00	-		5				
	18V			62.00	62.00	-		2				
						-		-				
T3 Sec						-		-				
	24A			69.00	69.00	-		2				
	24B			84.00	84.00	-		3				
	25A			116.00	116.00	-		4				
	25B				196.00	196.00		7				
	25C				136.00	136.00		5				
	26			132.00	132.00	-		4				
	26A			63.00	63.00	-		2				
	26B			196.00	196.00	-		7				
	26C			190.00	190.00	-		6				
	26D			58.00	58.00	-		2				
	26E			370.00	370.00	-		12				
	26F		22664	149.00	149.00	-		5				
	26G			68.00	68.00	-		2				
	26H			58.00	58.00	-		2				
	27			461.00	461.00	-		15				
	28				265.60			9				
	31			157.00	157.00	-		5				
	32			200.00	200.00	-		7				
	33			208.00	208.00	-		7	25.00	35.00		
	33A				116.00	116.00		4				
	33B				156.00	156.00		5				
	34			208.00	208.00	-		7	14.00	12.00		
	35			217.00	217.00	-		7	14.00	15.00		
	36			114.00	114.00	-		4				
	37			196.00	196.00	-		7				
						-						
Total Length of HDPE Pipe				**5,879**	**8,455**	**1,439**		**260**	**113**	**96**	**145**	

c) 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	35	515m		
4	Boundary wall construction	0	580 m		
5	Office cum lab building, WWTP, Jatuwa	Priming of Doors, windows and grill			
5	Workshop Building & Generator/Changing Building, WWTP, Jatuwa	Priming of Doors, windows and grill			
6	Sump Well	Excavation of Sump Well up to 5 m depth, Laying of flushing pipe 700 dia		Complete of Excavation and laying of reinforcement	

d) Production of Precast Items from Slab Casting Yard, Katahari

S.N.	Description	Unit	Quantity			Remarks
			Till Previous Month	Till This Month	This Month Work	
1	Slabs	Nos	23803	25903	2100	
2	Precuts	Nos.	3853	4065	212	
3	Kerb Stone	Nos.	5812	5812	0	

e) Production of Precast Chambers at Yard Katahari

S.N.	Description	Unit	Quantity			Remarks
			Till Previous Month	Till This Month	This Month Work	
1	Manhole	Set	325	505	180	
2	Sewer Inlet	Set	392	682	290	
3	House Connection	Set	473	728	255	

f) Hume Pipe Production from Hume Pipe Production Factory, Itahari

Daily Hume Pipe Production for the Month May 2015

S.N.	1	2	3	4	5	6	7	8	9	10	11
Diameter	200mm Ø	300mm Ø	350mm Ø	400mm Ø	450mm Ø	500mm Ø	600mm Ø	700mm Ø	900mm Ø	1000mm Ø	1600mm Ø
No of Moulds	38	3	2	2	2	3	8	8	2	4	2
Previous Month Production	1562	152	166	199	111	248	760	947	263	567	237
This Month Production	0	14	35	34	35	40	85	125	0	20	30
Total Production	1562	166	201	233	146	288	845	1072	263	587	267

6.2 Financial Progress and Cash Flow

Detail of payment:

Installment Number	Net Payble Amount (NRs.)	Remarks
IPC 01	200,940,000.00	Advance Payment 01
IPC 02	27,853,500.98	IPC 2
IPC 03	47,507,270.95	IPC 3
IPC 04	42,241,392.52	IPC 04
IPC 05	22,035,291.99	IPC 05
IPC 06	85,573,541.38	IPC 06
IPC 07	76,203,672.17	IPC 07
IPC 08	115,297,549.23	IPC 08
IPC 09	109,414,317.97	IPC 09
Total=	**526,126,537.19**	

7 Details of Safeguard activities

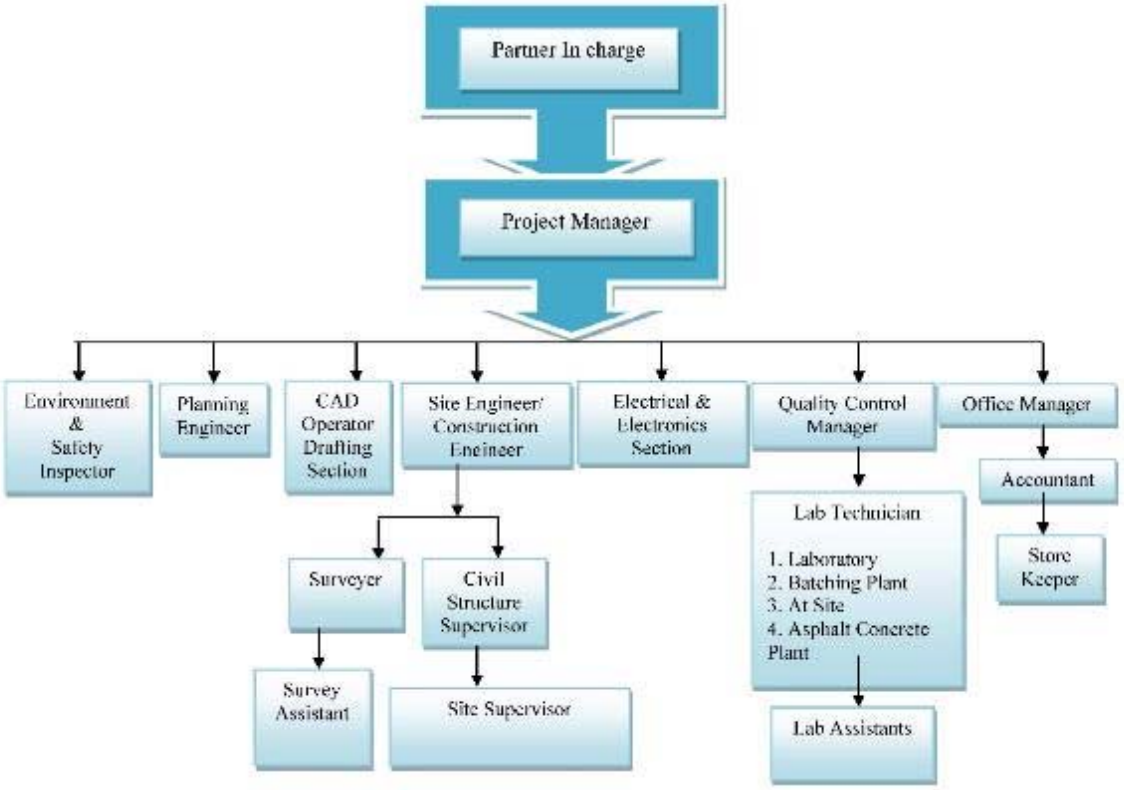
Till the date no such issues have been faced relating to the Social, Environmental and Resettlement matter.

8 Key Issues and Remarks

Following issues were raised and solved as per instruction of Engineer:

- Sewer line construction at secondary lines is undertaking on few right of way cleared sites only. Still most of the parts of secondary lines are to be cleared till right of way.
- Rainfall occurring mostly daily from the mid of the month has obstructed the Hume pipe laying, manhole construction and drain construction.
- Massive earthquake that came nationwide at the end of last month has injured family members and damaged property of workers. Work has been affected due to lack of labor and staffs.

9 Work Plan Professional input



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	40	32m/ 8f
18	Unskilled Labors	135	115m/ 20f

Laborers at site work

The detail of laborers is listed in table below.

Details of Labor

S.N.	Labour Type	Numbers		Remarks
Skilled Labor				
1.	Mason/carpenter	14		
2.	Plumber	10		
3.	Electrician	6		
4.	Bar Bender	12		
5.	Wielder	10		
6.	Scaffold	8		
7.	Drivers	18		
Unskilled Labor				
	Labor	**Male**	**Female**	
1.	Labors (Skilled)	32	8	40
2.	Labors (Unskilled)	115	20	135
Total		147	28	

S.N.	Name	Designation	Attendance Days
1	Ujjwal Prasai	Project Manager	25
2	Santosh Pudasaini	Planning/ Construction Engineer	20
3	Mahesh Subedi	Construction Engineer	15
4	Umesh Kumar Dangol	Site Engineer	25
5	Uddhav Bhatta	Site Engineer	25
6	Roshan Prasad Gupta	Site Engineer	16
7	Surya Kadel	Office Engineer	14
8	Niraj Raut	Site Engineer	25
9	Sujeet Dahal	Office/ Bill Engineer	25
10	Sunil Chaudhary	Quality Control Manager	25
11	Vishwo Bandhu Mainali	Accountant/ Office Manager	25
12	Krishna Adhikari	Jr. Accountant	25
13	Narayan Rijal	Senior Site Supervisor/Safety Manager	20
14	Sagar Shrestha	Junior Engineer	25
15	Dipesh Kumar Chaudhary	Junior Engineer	10
16	Suresh Chaudhary	Junior Engineer	10
17	Suman Tamang	Junior Engineer	25
18	Sujan Singh Thakuri	Junior Engineer	15
19	Bipin Rai	Junior Engineer	25
20	Saroj Shrestha	Junior Engineer	25
21	Suman Shrestha	Junior Engineer	25
22	Bishal Shrestha	Junior Engineer	25
23	Sanjay Shrestha	Junior Engineer	25
24	Sabita Thapa	Sub-Overseer	25
25	Angira Rai	Sub-Overseer	25
26	Rojina LG	Sub-Overseer	20
27	Gaurab Subba	Sub-Overseer	25
28	Prakash Bhattrai	Sub-Overseer	25
29	Pradip Rai	Sub-Overseer	25
30	Ajaya Rai	Site Supervisor	25
31	Uttar Karki	Site Supervisor	25
32	Ishowr Adhikari	Site Supervisor	25

33	Santosh Mukhiya	Site Supervisor	25
34	Anil Pokhrel	Site Supervisor	25
35	Prasasan Rajbansi	Site Supervisor	25
36	Tanka Pokhrel	Store Manager	25
37	Manoj Pandit	Store Assistant	25
38	Nirnaya Upreti	Store Assistant	25
39	Gopi Yadav	Store Assistant	25
40	Dipesh Dahal	Lab Assistant	25
41	Ramesh Koirala	Lab Assistant	25
42	Mahakanta Risidev	Lab Assistant	25
43	Sandeep Pyakurel	Light Driver (7621)	24
44	Gurucharan Yadhav	Light Driver (1082)	14
45	Kiran Manandhar	Light Driver (1086)	25
46	Satya Dhimal	Light Driver	25
47	Dip Budathoki	Light Driver	25
48	Mangal Kisku	JCB Operator	25
49	Surya Bdr. Malla	Loader Operator	17
50	Rupana Chaudhary	TM Driver	25
51	Bhabesh Rai	Batching Operator	20
52	Chandan Roy	Pc-200 Operator	25
53	Jeet Bdr Gurung	Teller (4423) Driver	25
54	Ananda Rajbansi	Electrician	25
55	Kamal Yadhav	Electrician	25
56	Pappu Yadav	Mechanic	25
57	Mukesh Mandal	Mechanic	25
58	Bhanu Bhakta Kafle	Plumber	22
59	Ganga Ram Dhital	Plumber	25
60	Niroj K. Puri	TM Driver(7561)	20
61	Dhan Kaji Gurung	TM Helper	25
62	Indra RajBansi	Tractor Driver (6204)	25
63	Kartik Thrau	Tractor Driver (8304)	25
64	Tilak Ghalan	Transit mixer Driver	25
65	Nakkul Paddhar	Tanker Driver	25

66	Udit Narayan	Tanker Driver	25
67	Basudev Yadav	Tractor Driver	25
68	Sudeep Rajbansi	JCB Helper	25
69	Manita Shrestha	Kitchen Helper	18
70	Kalpana Tamang	Kitchen Helper	20
71	Sita Thapa	Kitchen Helper	25
72	Pabitri Rishidev	Kitchen Helper	25
73	Kabita Kadel	Kitchen Helper	15
74	Pabitra Rai	Kitchen Helper	14
75	Pabitra Tamang	Kitchen Helper	26

Details of Equipment

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	Breakdown for few days
	Komatsu Excavator PC120	PC 120		1	Good	
	Kobelko Excavator 75	Kobelko 75		1	Good	Breakdown for few days
	Cat Excavator 320	Cattepiller		1	Good	
A.2	**JCB**					
	JCB Hydra	JCB		1	Good	
	JCB Loader	JCB		1	Good	
	JCB Backhoe	JCB		6	Good	
A.3	**Grader**					
	Komatsu Grader GD405	Komatsu		1	Good	
A.4	**Crane/Teller**					
	Crane with Teller			1	Good	
	Teller			2	Good	
A.5	**Water Tanker**					
	Water Tanker		12000 Lt.	1	Good	
A.6	**Tractors/Tipper**					
	Tractors	Indian	3 m^3	9	Good	
	Tipper		15 m^3	17	Good	
A.7	**Service Vehicle**				Good	
	Jeep	Pajero	5 door	2	Good	
	Jeep	Landcrusher	5 door	1	Good	
	Jeep	Indian/Tata Sumo	5 door	1	Good	
	Jeep	Indian/Bolero	5 door	1	Good	
	Pickup	Indian/Mahindra	4 door	1	Good	
	Motorbike	125CC		10	Good	
A.8	**Other Equipment and Tools**					
	Kerb Stone Machine Set			1	Not Used	
	Generator	Jackson	125KVA	1	Good	
	Generator	Kirloskar	25KVA	1	Good	
	Generator	Kirloskar	15KVA	1	Good	
	Generator	Honda	5KVA	1	Good	

	Welding Machine	Oswal,India	650amp	1	Good	
	Welding Machine		350amp	1	Good	
	Welding Machine		250amp	1	Good	
	Diesel tank with Pump		60000 Ltr.	1	Good	
	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			1	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	
	Isuzu Transit Mixture		5 m^3	1	Good	
	Concrete Mixture Hydraulic			2	Good	
	Manual Mixture Machine			6	Good	
C	**Asphalt Concrete Production**					
	Asphalt Concrete Plant		50 ton/ hr	1	Not Used	
	Asphalt Paver Machine			1	Not Used	

10 Conclusion

Drain construction, HDPE/ Hume pipe laying and manhole construction is underway at several lines.

Similarly, precast chambers installation at right of way cleared sites is undertaking.

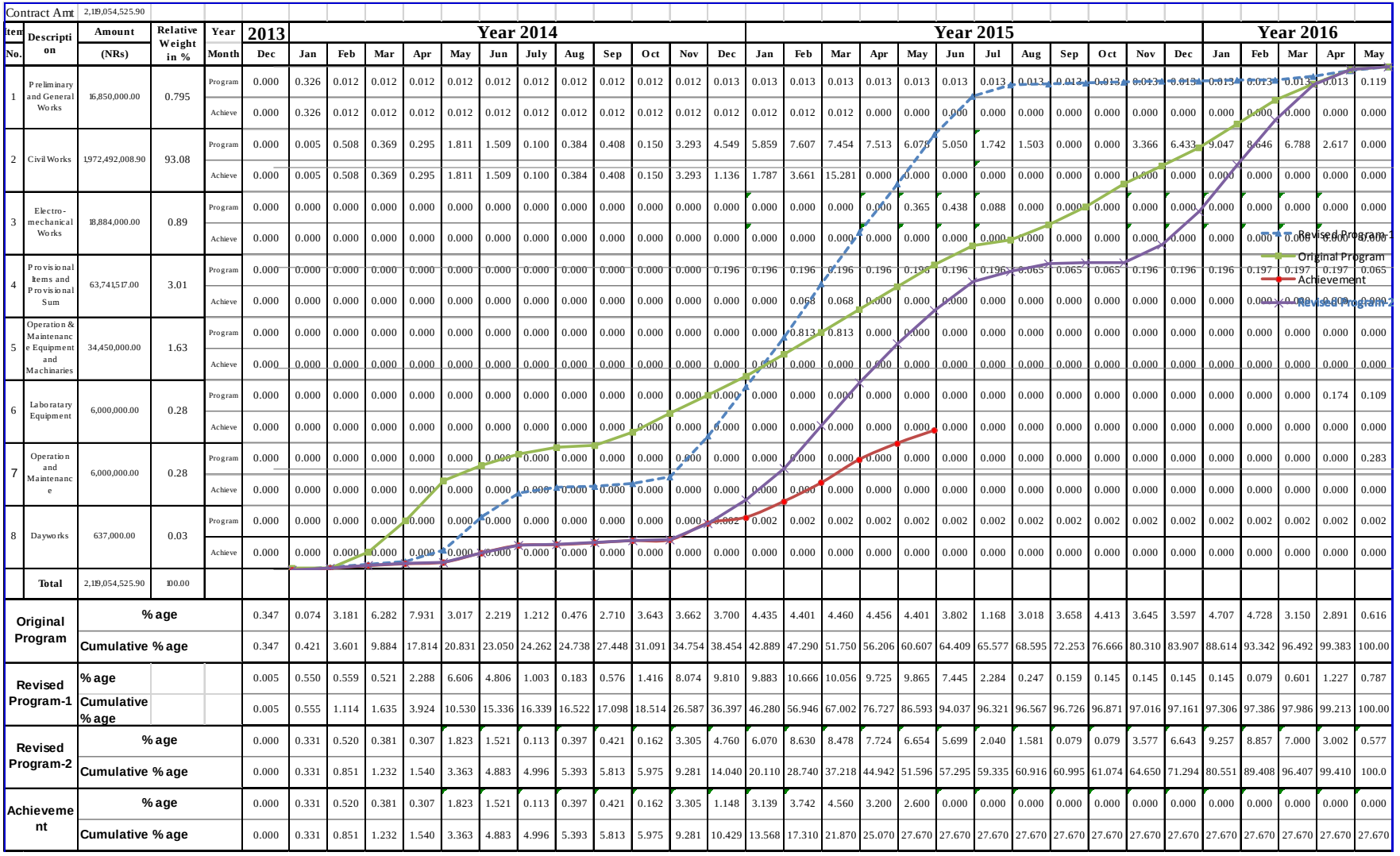
At the key working season, contractor's resources are mobilized to full extent. Multiple sites are underway at several places of Biratnagar but they are obstructed due to unavailability of Site Possession, rainfall and earthquake. If all sites are possessed, the project can be completed on time.

ANNEX

S – Curve

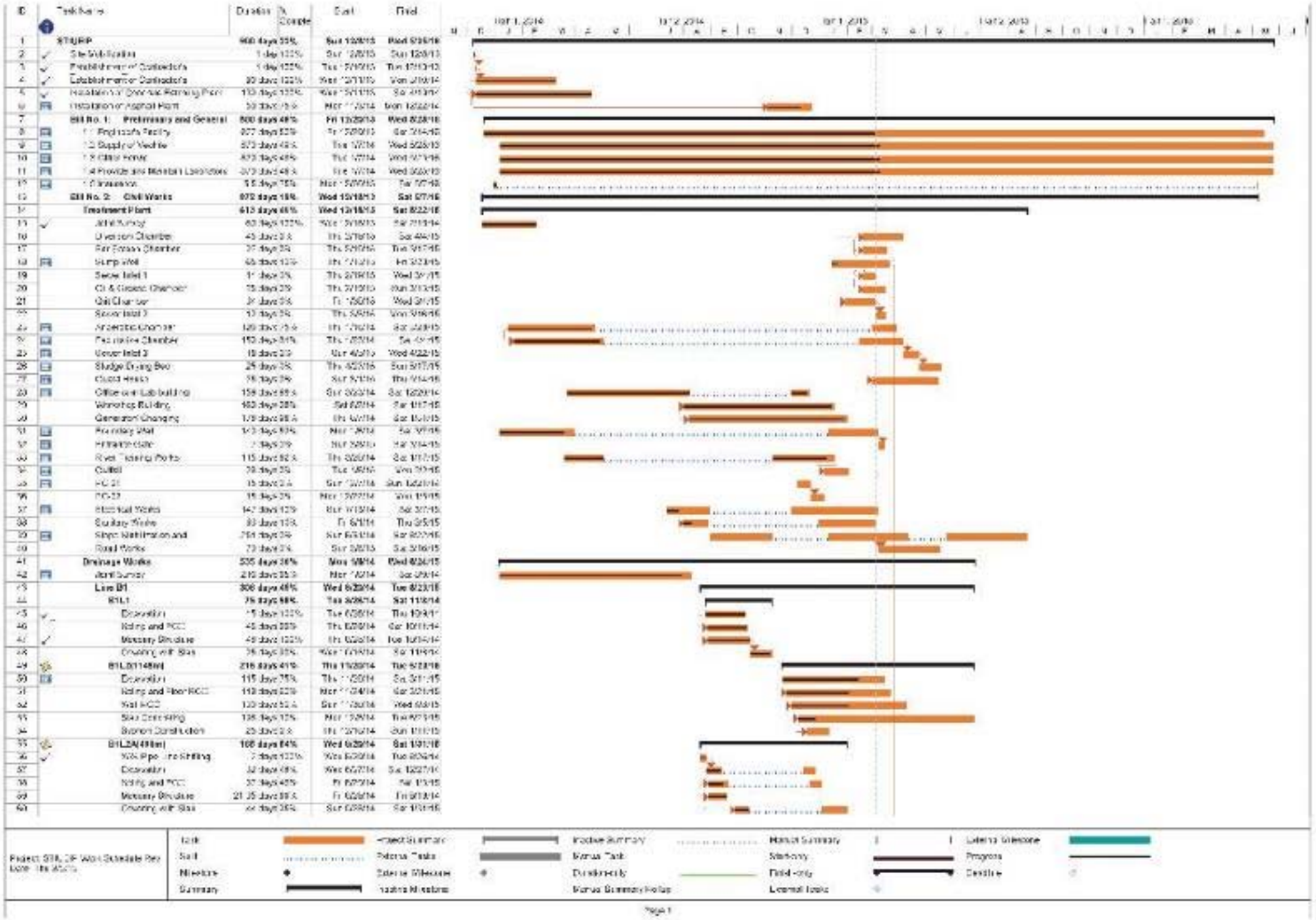
Contract Amt 2,19,054,525.90

Item No.	Description	Amount (NRs)	Relative Weight in %	Year	2013	Year 2014												Year 2015												Year 2016				
				Month	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	Preliminary and General Works	16,850,000.00	0.795	Program	0.000	0.326	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.119
				Achieve	0.000	0.326	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	Civil Works	1,972,492,008.90	93.08	Program	0.000	0.005	0.508	0.369	0.295	1.811	1.509	0.100	0.384	0.408	0.150	3.293	4.549	5.859	7.607	7.454	7.513	6.078	5.050	1.742	1.503	0.000	0.000	3.366	6.433	9.047	8.646	6.788	2.617	0.000
				Achieve	0.000	0.005	0.508	0.369	0.295	1.811	1.509	0.100	0.384	0.408	0.150	3.293	1.136	1.787	3.661	15.281	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	Electro-mechanical Works	18,884,000.00	0.89	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.365	0.438	0.088	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	Provisional Items and Provisional Sum	63,741,517.00	3.01	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.196	0.196	0.196	0.196	0.196	0.196	0.196	0.196	0.065	0.065	0.065	0.196	0.196	0.196	0.197	0.197	0.197	0.065
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.068	0.068	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	Operation & Maintenance Equipment and Machinaries	34,450,000.00	1.63	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.813	0.813	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	Laboratary Equipment	6,000,000.00	0.28	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.174	0.109
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	Operation and Maintenance	6,000,000.00	0.28	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.283
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	Dayworks	637,000.00	0.03	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
				Achieve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Total	2,19,054,525.90	100.00																														
Original Program	% age				0.347	0.074	3.181	6.282	7.931	3.017	2.219	1.212	0.476	2.710	3.643	3.662	3.700	4.435	4.401	4.460	4.456	4.401	3.802	1.168	3.018	3.658	4.413	3.645	3.597	4.707	4.728	3.150	2.891	0.616
	Cumulative % age				0.347	0.421	3.601	9.884	17.814	20.831	23.050	24.262	24.738	27.448	31.091	34.754	38.454	42.889	47.290	51.750	56.206	60.607	64.409	65.577	68.595	72.253	76.666	80.310	83.907	88.614	93.342	96.492	99.383	100.00
Revised Program-1	% age				0.005	0.550	0.559	0.521	2.288	6.606	4.806	1.003	0.183	0.576	1.416	8.074	9.810	9.883	10.666	10.056	9.725	9.865	7.445	2.284	0.247	0.159	0.145	0.145	0.145	0.145	0.079	0.601	1.227	0.787
	Cumulative % age				0.005	0.555	1.114	1.635	3.924	10.530	15.336	16.339	16.522	17.098	18.514	26.587	36.397	46.280	56.946	67.002	76.727	86.593	94.037	96.321	96.567	96.726	96.871	97.016	97.161	97.306	97.386	97.986	99.213	100.00
Revised Program-2	% age				0.000	0.331	0.520	0.381	0.307	1.823	1.521	0.113	0.397	0.421	0.162	3.305	4.760	6.070	8.630	8.478	7.724	6.654	5.699	2.040	1.581	0.079	0.079	3.577	6.643	9.257	8.857	7.000	3.002	0.577
	Cumulative % age				0.000	0.331	0.851	1.232	1.540	3.363	4.883	4.996	5.393	5.813	5.975	9.281	14.040	20.110	28.740	37.218	44.942	51.596	57.295	59.335	60.916	60.995	61.074	64.650	71.294	80.551	89.408	96.407	99.410	100.0
Achievement	% age				0.000	0.331	0.520	0.381	0.307	1.823	1.521	0.113	0.397	0.421	0.162	3.305	1.148	3.139	3.742	4.560	3.200	2.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Cumulative % age				0.000	0.331	0.851	1.232	1.540	3.363	4.883	4.996	5.393	5.813	5.975	9.281	10.429	13.568	17.310	21.870	25.070	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670	27.670



Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi

Work Schedule and Progress



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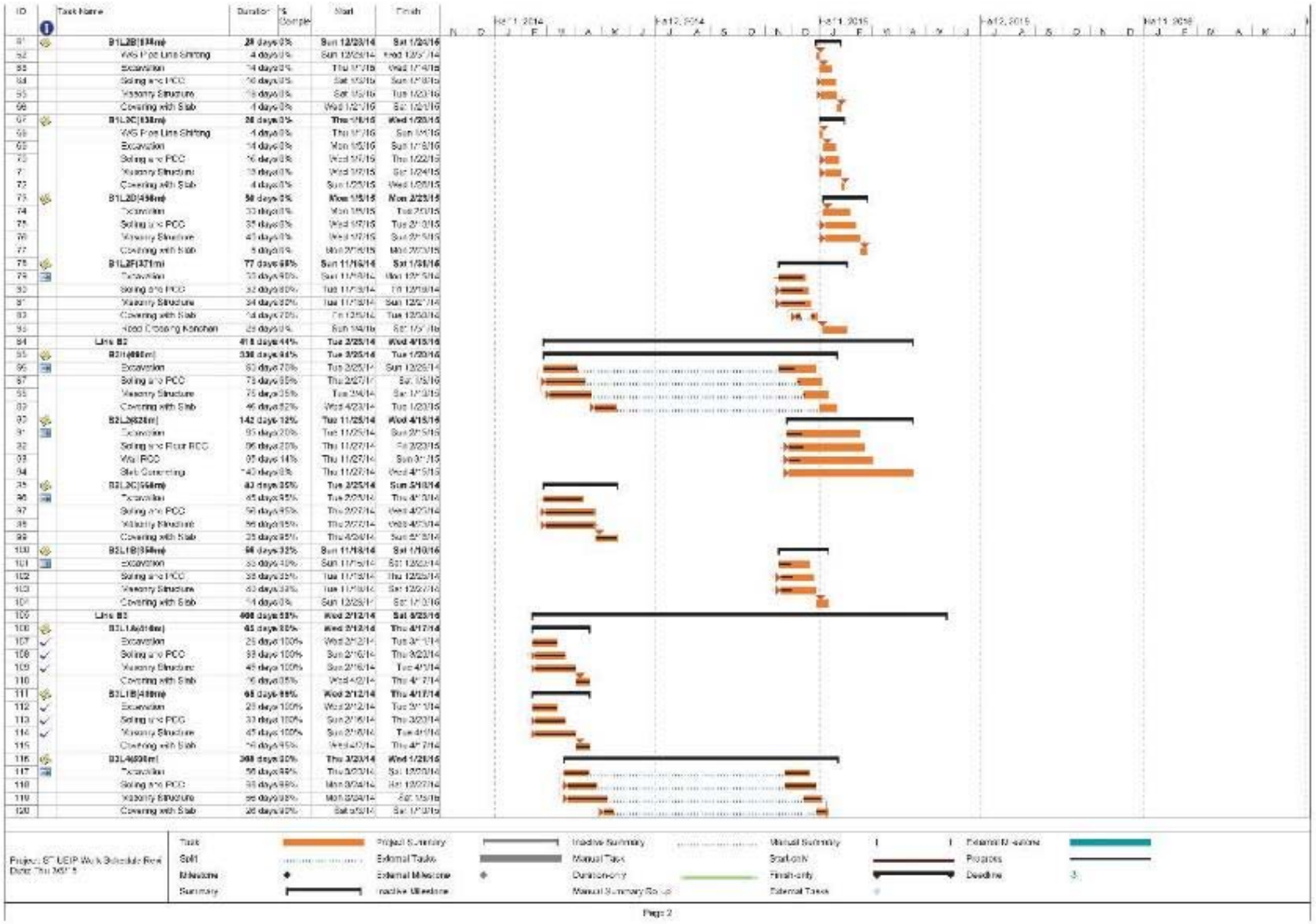

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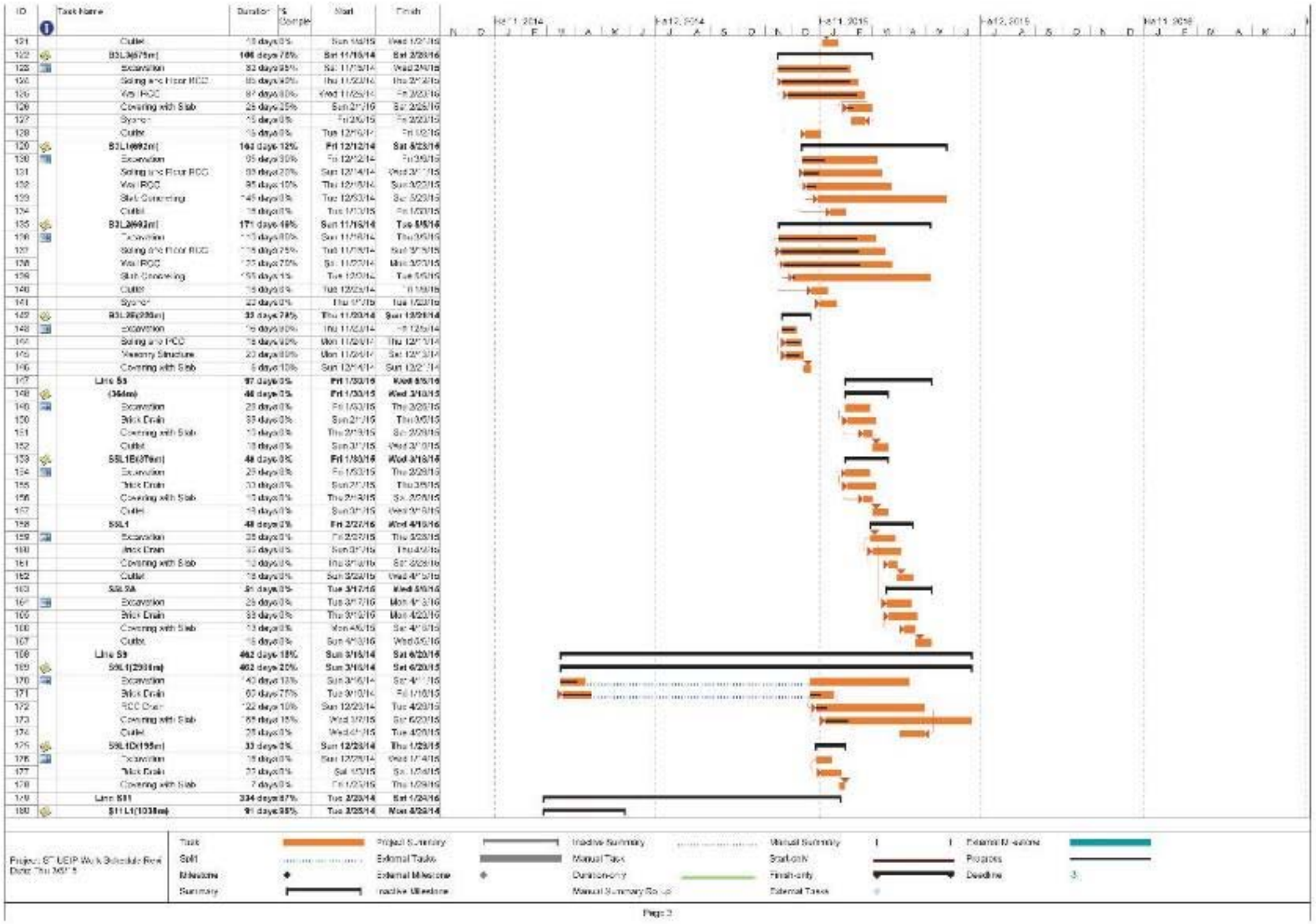
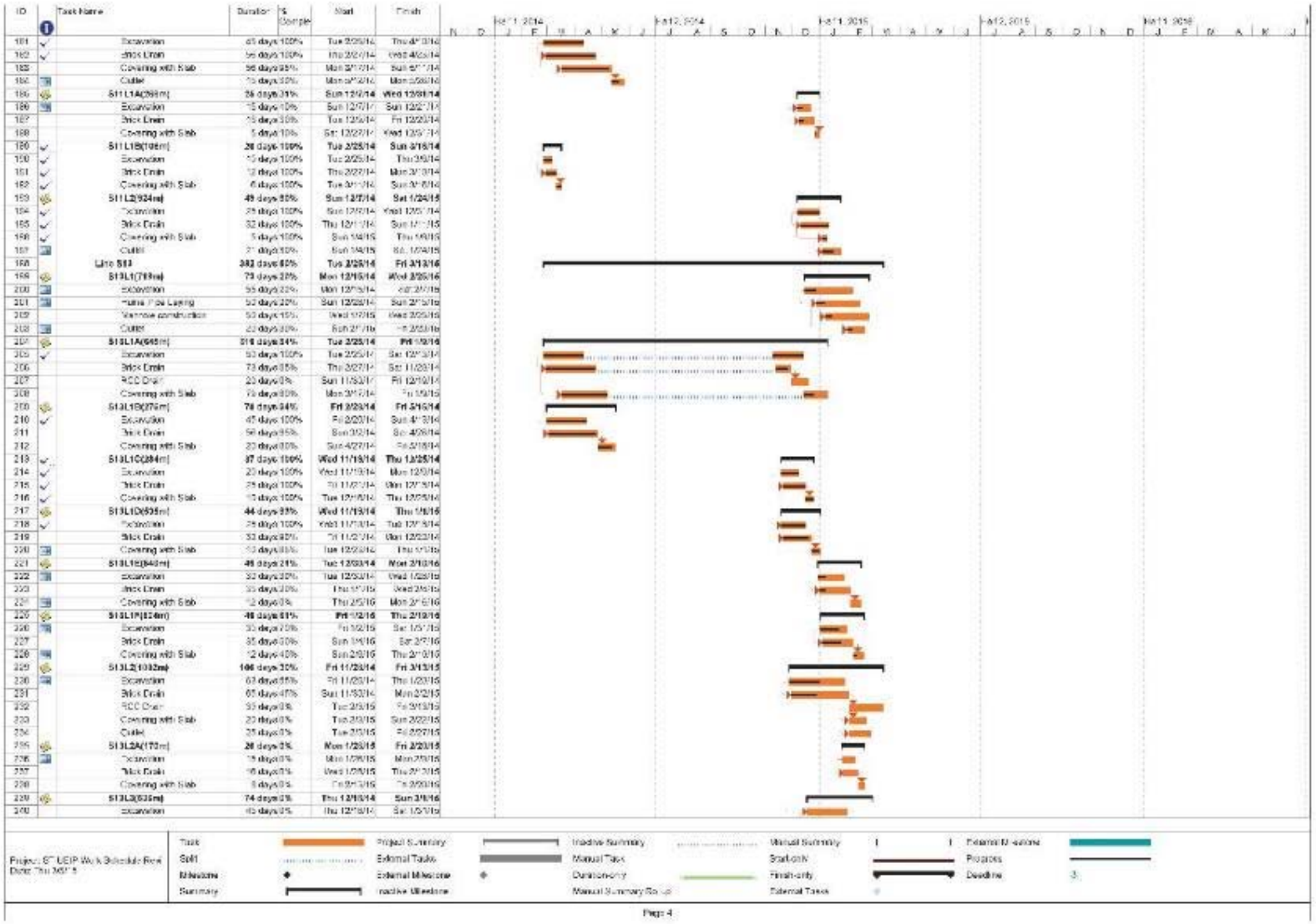
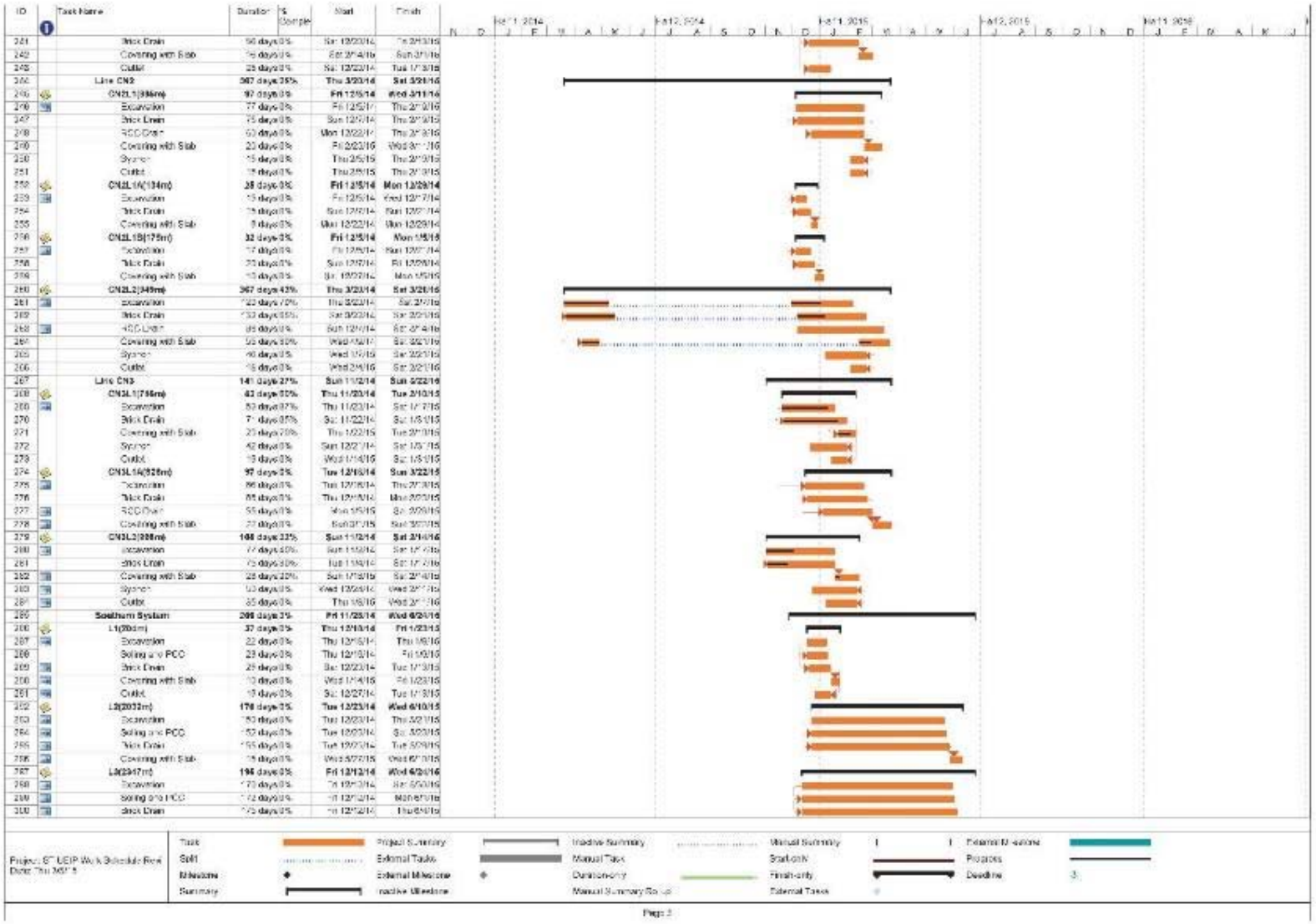
Site Office: Katahari, Judi







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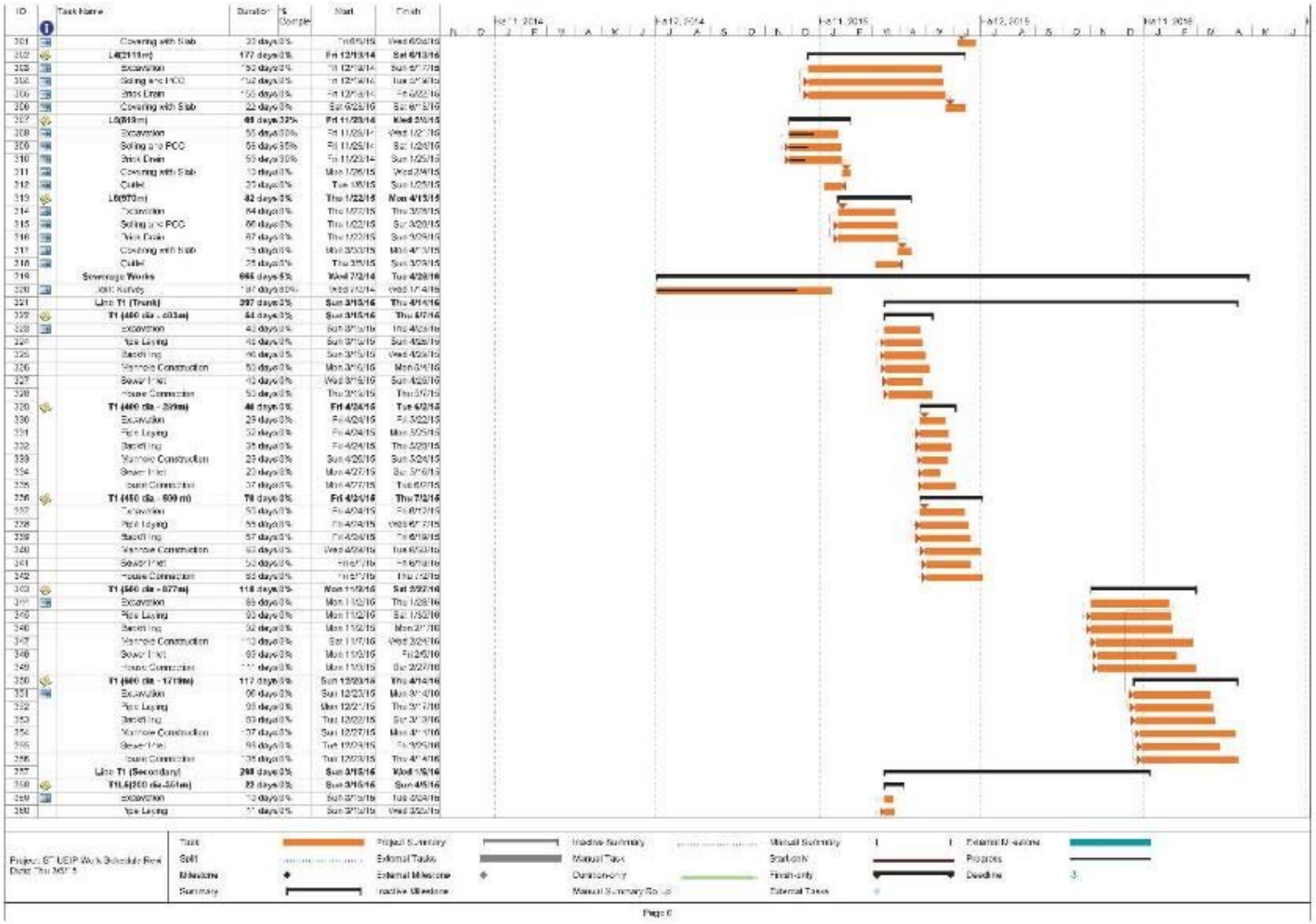
Site Office: Katahari, Judi



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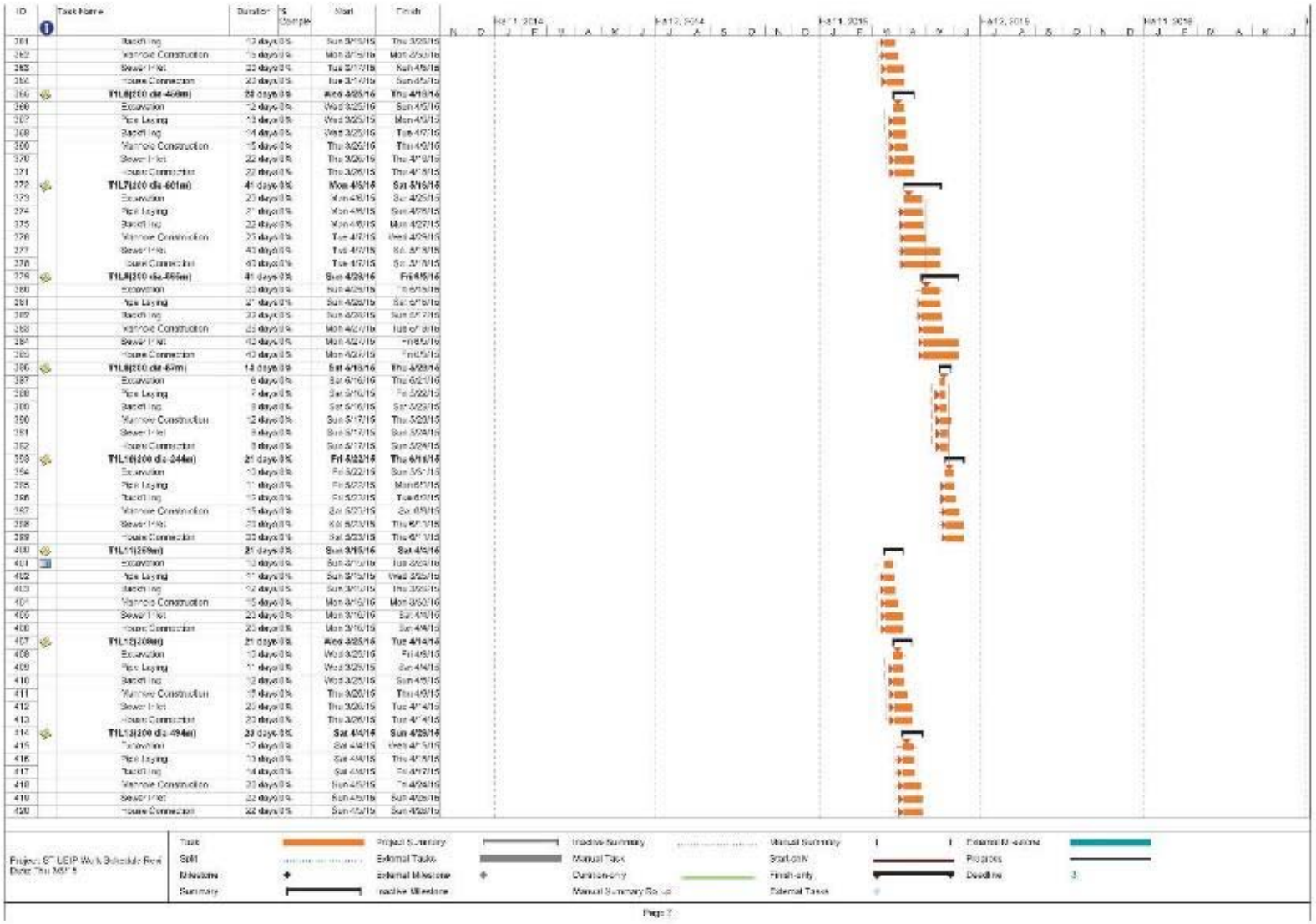
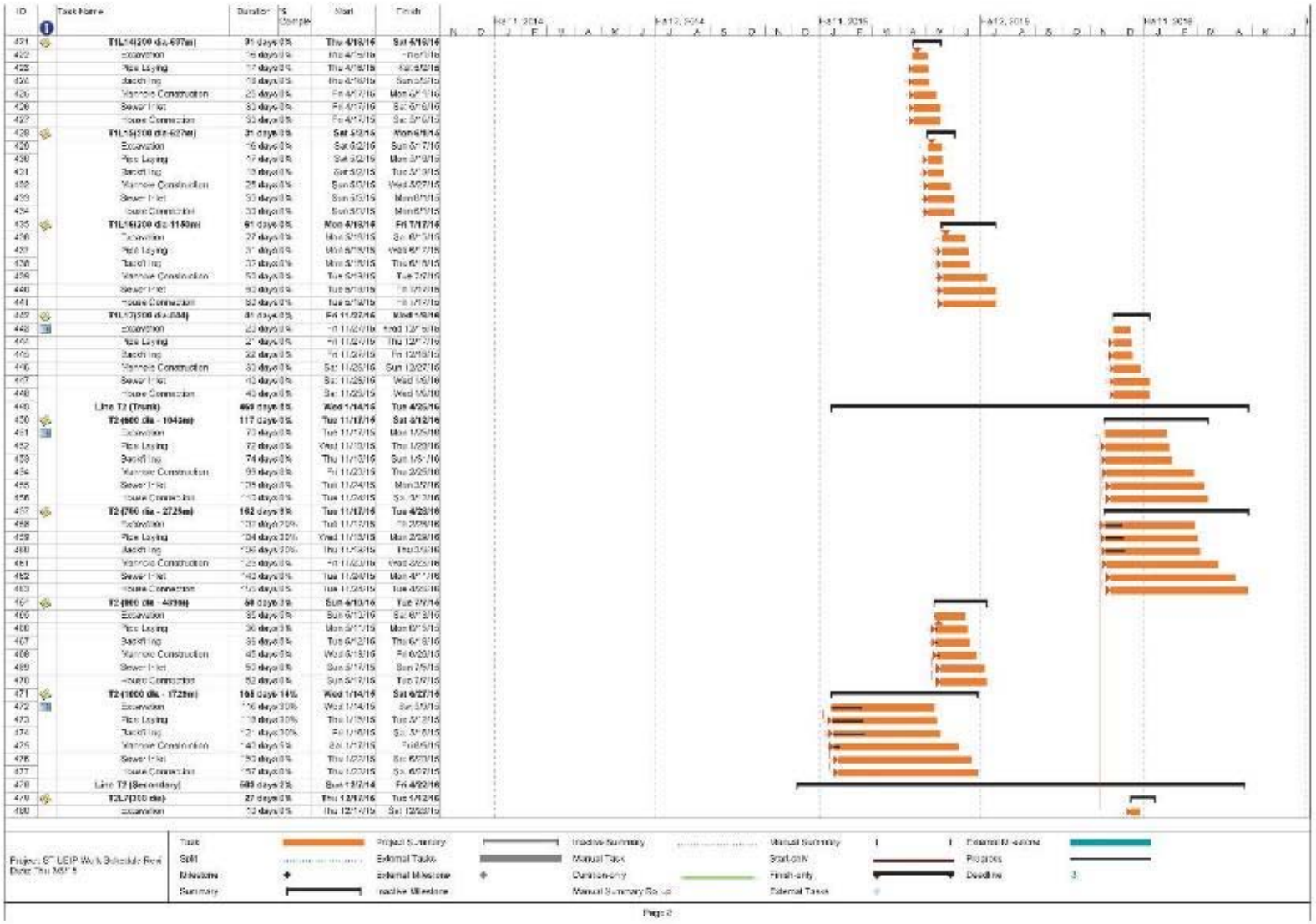
Site Office: Katahari, Judi



Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi



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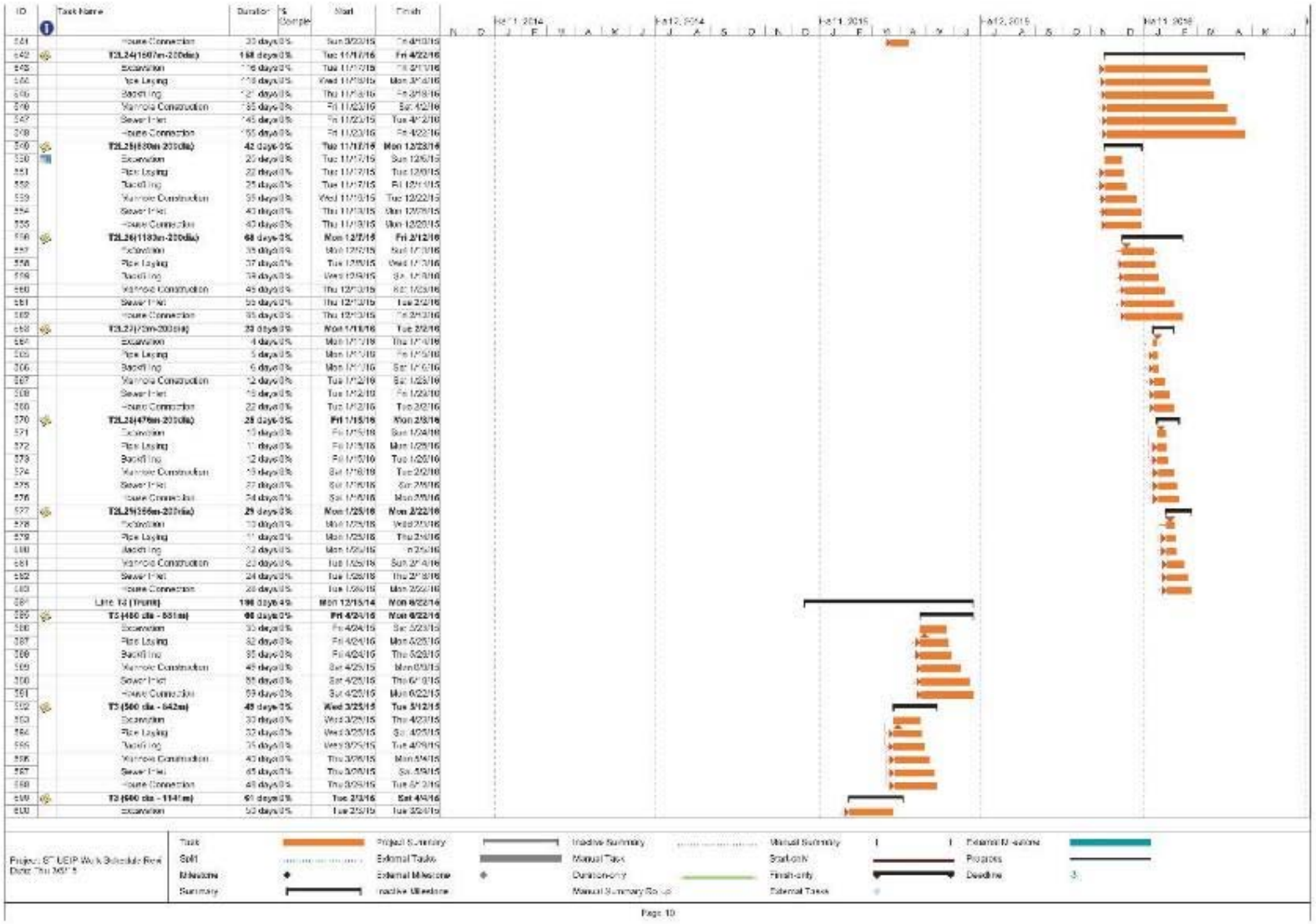

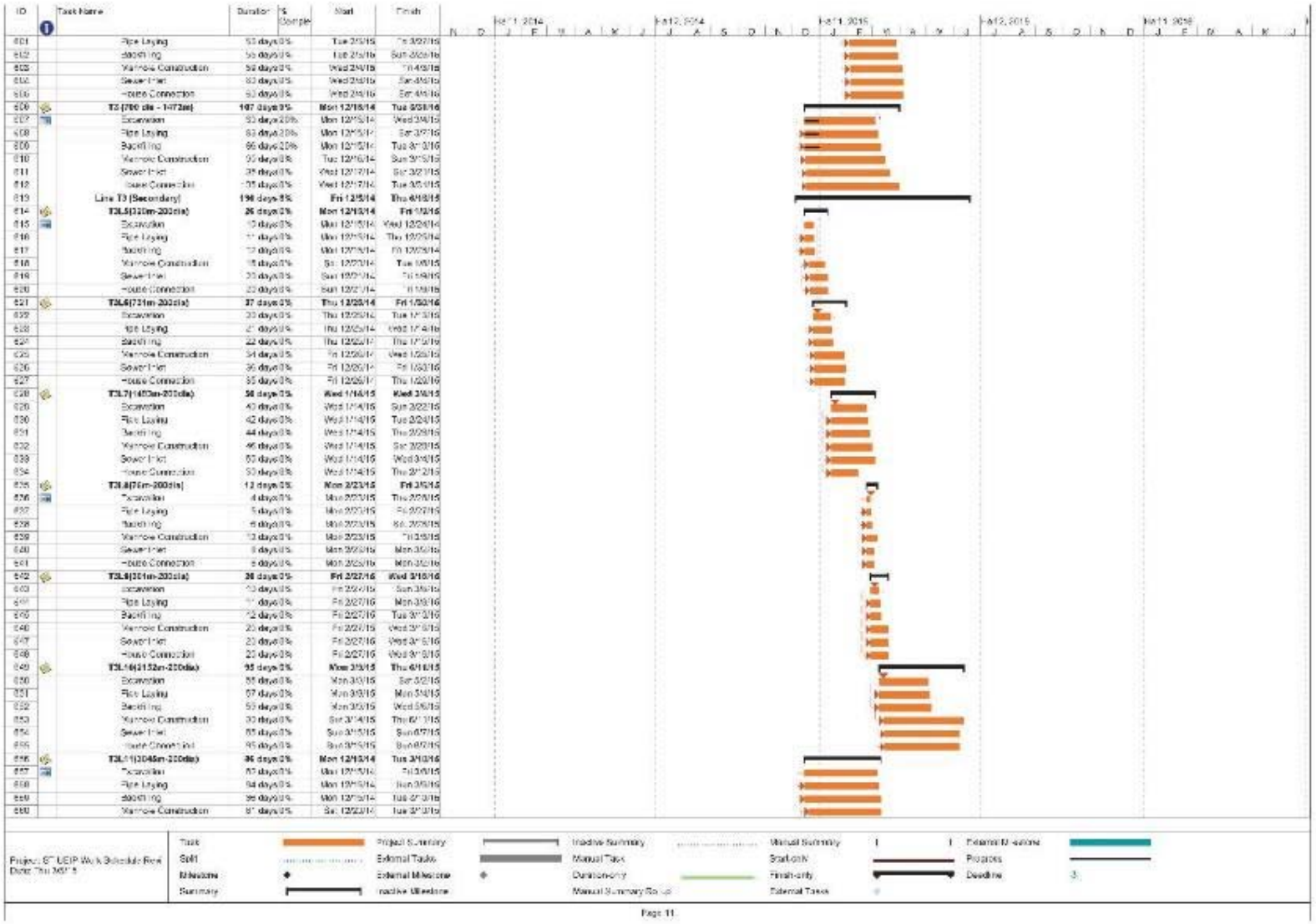

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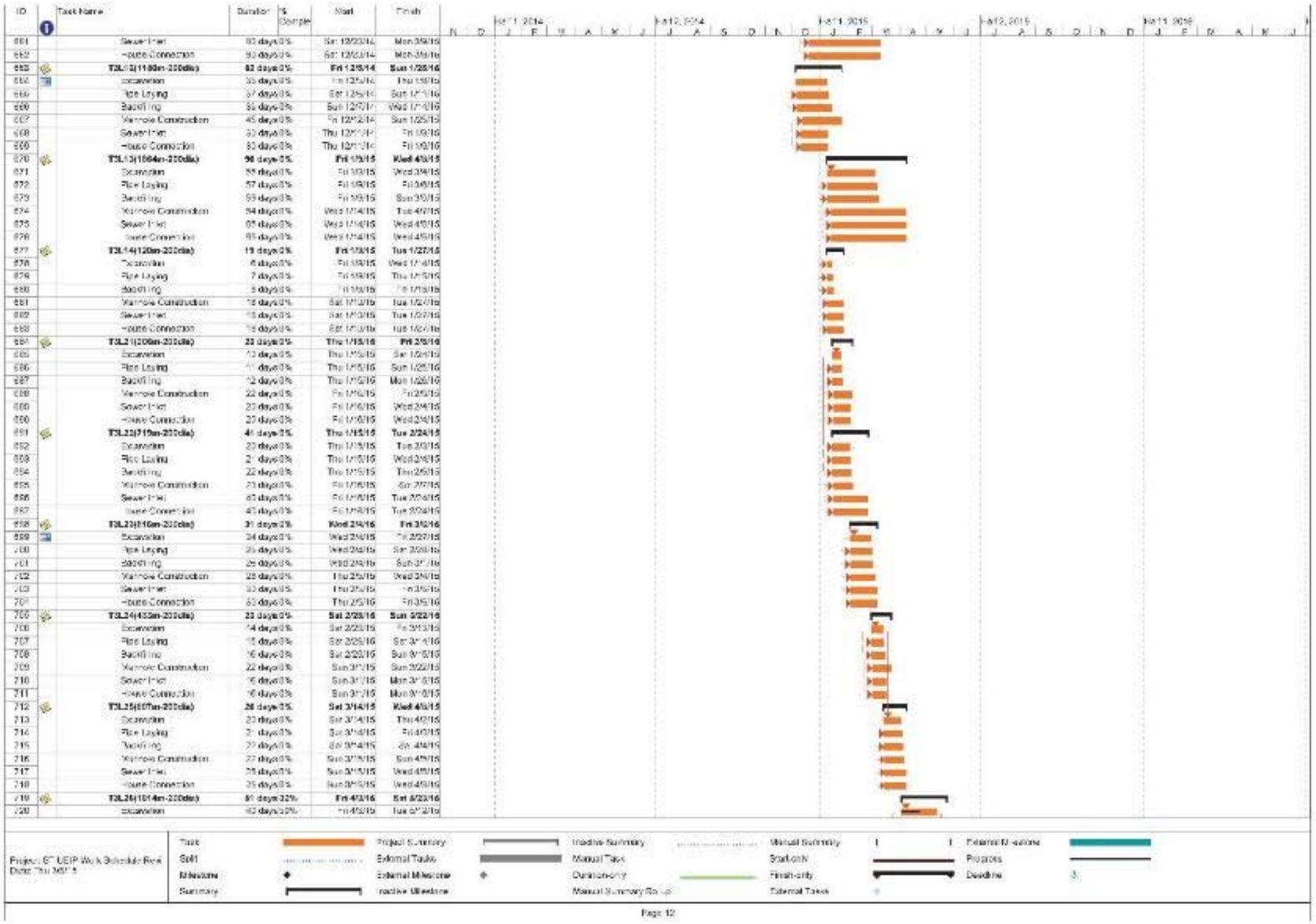

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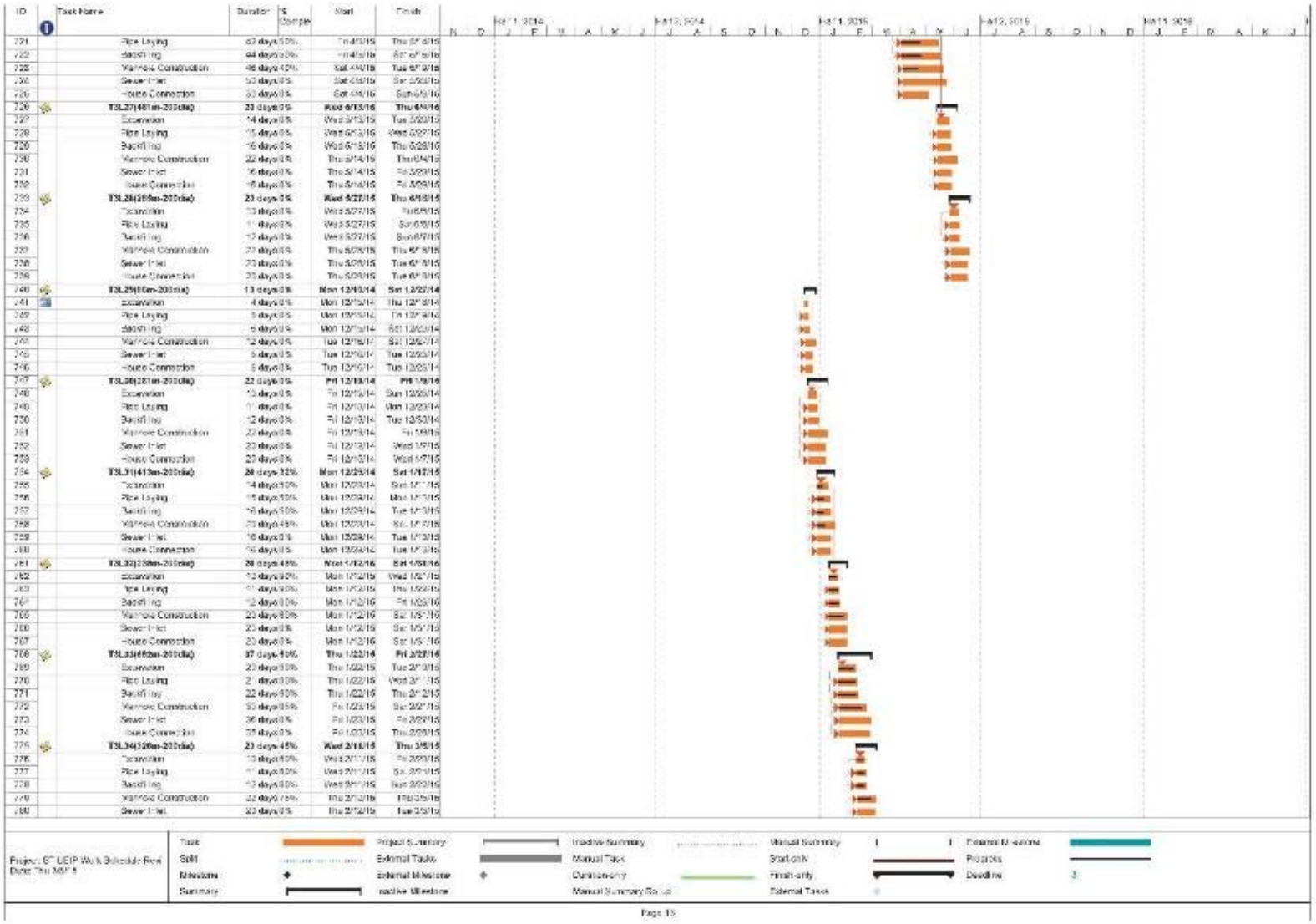

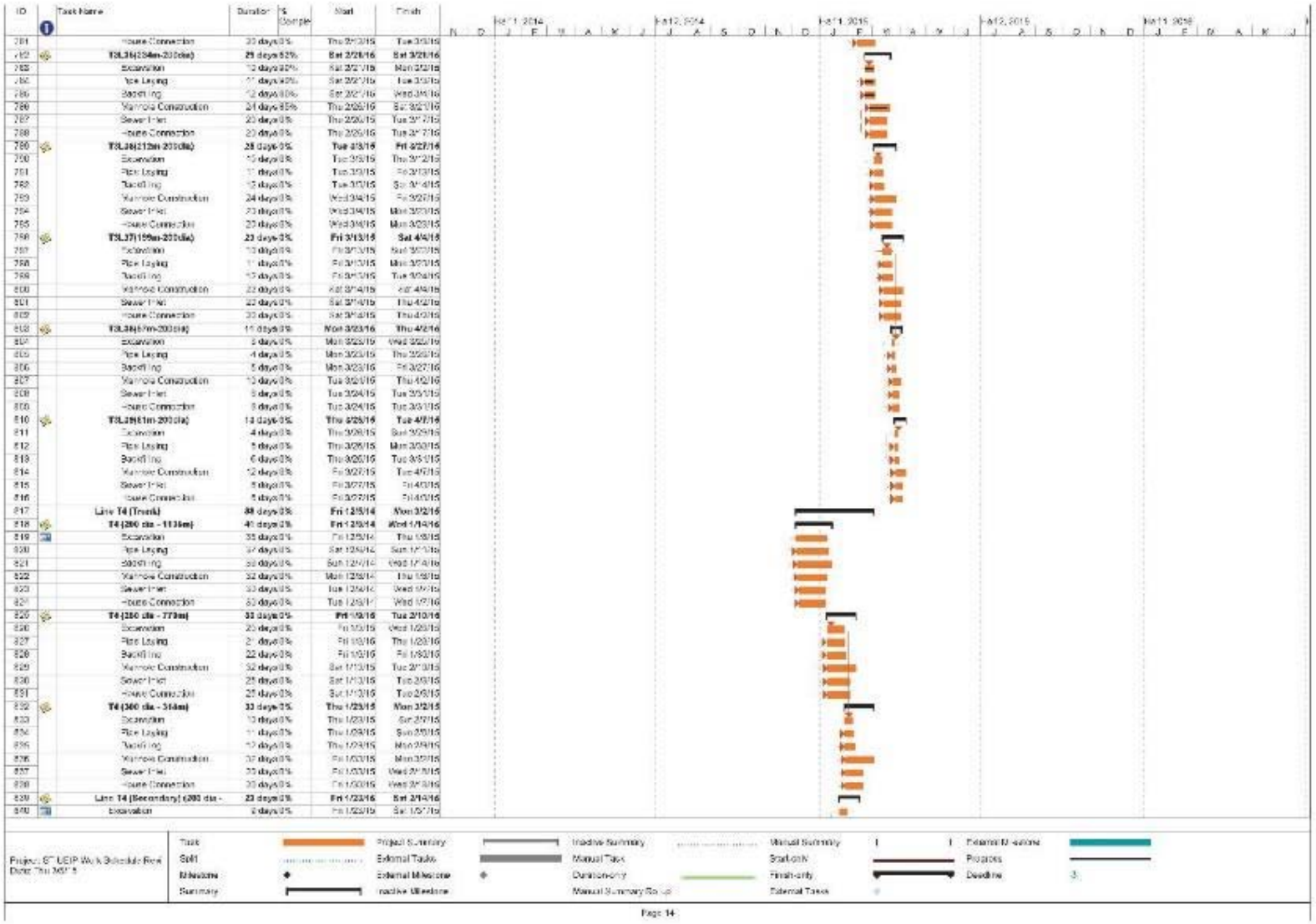

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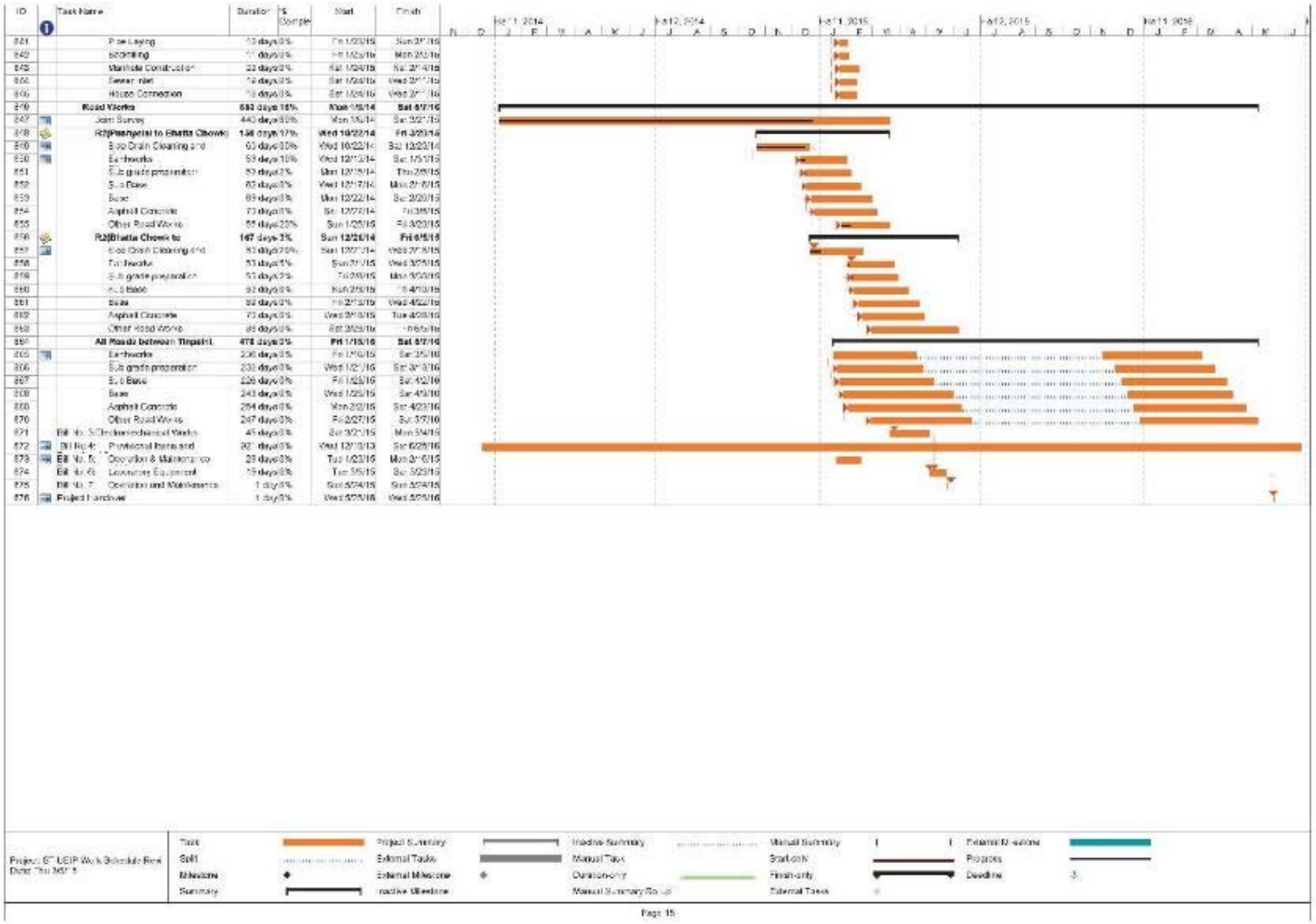

Photographs of the Month

Figure 1 Brick Drain Construction at Rani

Figure 2 RCC Drain at line B2

Figure 3 HDPE pipe laying for water supply at R2 Road

Figure 4 Pipe repair and maintenance at Line B1

Figure 5 Syphon head wall of Line B1

Figure 6 Precast Chamber Installation at Sewer line T2 Secondary

Figure 7 HDPE pipeline laying for water supply at R2

Figure 8 Road Crossing at R2 Road

Figure 9 Road Crossing at Road R2

Figure 10 Hume Pipe Laying at Jatuwa (T2 Trunk)

Figure 11 Road backfilling at Trunk Line T2 at Jatuwa Chowk

Figure 12 HDPE pipe laying at sewer line T2 secondary

Figure 13 RCC Drain construction at line B2 near outlet

Figure 14 Brick drain construction at line Rani

Figure 15 Brick Drain construction at Line Rani

Figure 16 Brick manhole construction at line T2 Trunk Jatuwa Chowk

Figure 17 Hume Pipe excavation at line T3 Trunk

Figure 18 Hume pipe laying at Trunk line T2

Figure 19 HDPE pipe laying at T2 Secondary line

Site-Specific EMAP Monitoring Checklist

Name of Contractor: M/S CTCE-KALIKA J.V. Contract No: STIUEIP/W/BRT/ICB-01 For the Month of May 2015
Consulting Engineers: SMEC-Brisbane-AQUA-BDA-CEMAT

(Insert sign √, or scale where applicable)

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
Preparation for construction				**Indicate in 1-5 scale**	**Indicate in 1-5 scale**	**Compliance (C); Non Compliance (NC) Not applicable (NA)**				
						C			**NC**	**NA**
						<25%	25-50%	**>75%**		
	Identify the temporary areas required by the project and locate them with proper marking	May result social tensions	Prepare the details of temporary land acquisition and other private properties	2	2					
			Submit to Supervising Engineer	2	2					
			Follow RAP for temporary acquisition	2	2					
	Submit applications to get an approval Submit such agreement and permits to Supervising Engineers for official information	May result social conflict and legal obstructions resulting in delay of work	Obtain Letters of Approval and Agreement for (i) temporary acquisition of land and properties (ii) relocation of religious site, foot trails, (iii) disruption of water supply, and others	2	2					
	Delineate and peg the areas required	May result social conflict and legal obstructions resulting in delay of work Pegging of project area	Pegging of all constructions site and labor camp	2	2					
			Maintain records of trees and other properties likely to be affected	2	2					
	Construct workforce camp	Haphazard camps resulting in social stress and degradation of local environment	Establish workforce camp at designated site only	2	2					
	Make employment policy for local and affected people as per EMP	Local people may be deprived of opportunities, Minors may be employed	Employ local people (not under age 14) especially SPAF, and PAF in jobs	2	2					
			Settle wage rate based on DWEC and provide the list of employees to Supervising Engineer	2	2					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
				Indicate in 1-5 scale	Indicate in 1-5 scale	Compliance (C); Non Compliance (NC) Not applicable (NA)				
						C			NC	NA
						<25%	25-50%	>75%		
Construction Phase: Physical Environment	**Construction Activity**									
	Adopt cut and fill principle during earthworks Disposal of excess materials in designated area Apply Bio-engineering for controlling of erosion and Gully	Soil Erosion sedimentation and slope instability	Adopt 'cut and fill' approach, wherever possible	2	2					
			Avoid works during monsoon	2	2					
			Provide proper drainage facilities	3	3					
			Stockpile top soil for reuse	2	3					
			Adopt gully control and bioengineering	2	3					
			Procure aggregates from already existing sites	2	2					
			Dispose spoil in designated area	2	3					
	Quarrying from river bed	Change in River Hydrology and River Morphology	Avoid Quarrying/Mining activity in river/streams for extraction of materials required for project shall not be done so that change the river cross sections and longitudinal profile do not occur	2	2					
			Ensure care so that irrigation canal/channel are not adversely affected by the project construction	2	1					
			Ensure care of stone spout in order not to disturb the existing flow.	2	1					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
				Indicate in 1-5 scale	Indicate in 1-5 scale	Compliance (C); Non Compliance (NC) Not applicable (NA)				
						C			NC	NA
						<25%	25-50%	>75%		
	Disturbance of drainage Dumping of waste in the river Construct of toilets in the camps Storing of materials in the project area Handling of toxic materials Dumping of excess materials Quarry operation	Water Pollution	Avoid camping facility within drainage	1	1					
			Prohibition on dumping of wastes in the water source	2	2					
			Provision of sanitary facility and prohibition on defecation in open areas	2	2					
			Proper storage of construction aggregates, hazardous, and toxic materials and proper disposal of chemical containers, packaging materials, plastic bags provide training to workforce on safe handling of toxic materials	2	2					
			Disposal of waste in the designated area	2	2					
			provide dumping site and waste treatment facility	2	3					
			Avoid excessive mining from riverbed.	2	2					
	Movement of vehicles Operation of crusher Earthworks Stockpiling of construction waste and construction materials	Air Quality deterioration	Spraying of water in dry season at construction site and disposal site (Three time a day)	2	2					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
				Indicate in 1-5 scale	Indicate in 1-5 scale	Compliance (C); Non Compliance (NC) Not applicable (NA)				
						C			NC	NA
						<25%	25-50%	>75%		
			Limit speed of construction vehicle	2	2					
			Safe place	2	2					
			Regularly maintain equipment and cover the stockpile	2	3					
			Compliance of vehicles with National Vehicle Mass Emission Standards, 2756 BS	2	2					
			Arrange proper ventilation in confined working areas	3	2					
	Movement of vehicles Operation of crusher Operation of construction machineries and equipment Horn honking	Noise and vibration	Fit mufflers to control noise							
			speed limit of construction vehicle	2	2					
			Use light horn in vehicles	2	2					
			Maintenance of equipment	2	2					
			Prohibit the operation of crushing plant between 7 PM to 6 AM	3	2					
			Compensate the damages caused by vibration	3	3					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
				Indicate in 1-5 scale	Indicate in 1-5 scale	Compliance (C); Non Compliance (NC) Not applicable (NA)				
						C			NC	NA
						<25%	25-50%	>75%		
	Scrapping of top spoil	Effect on Soil quality	Stockpile reusable top soil properly in safe yard	1	2					
	Storage of fuel, lubricating oil, chemicals etc.	Solid waste problems, health risk	Store all materials, toxic, non-toxic and hazardous materials in safe place (warehouse)	1	1					
	Project activities producing wastes such as used tyres, lubricating oil, exhausted battery etc		Collect, segregate and dispose waste at designated area	2	2					
Construction Phase: Biological Environment	**Construction Activity**									
	vegetation clearance for construction of project structures	Vegetation clearance	Cut only marked trees	2	1					
	Fuel wood and NTFPs collection by workforce	Loss of vegetation species	Prohibit fuel wood and timber collection	2	1					
			Prohibit illegal NTFPs collection and Trade	3	2					
	vegetation clearance for construction of project structures and compensation to them		Provide LPG/kerosene to workforce	3	2					
			Stockpile the felled trees and take permission from concerned authority for its use	2	3					
			Plant trees @ 5 times of each felled trees	2	3					
			Compensate for affected trees from private and community forests	3	3					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
				Indicate in 1-5 scale	Indicate in 1-5 scale	Compliance (C); Non Compliance (NC) Not applicable (NA)				
						C			NC	NA
						<25%	25-50%	>75%		
Construction Phase: Socio-Economic Environment	compensation and Rehabilitation as per RAP	Land Intake and compensation to affected people	Avoid involuntary displacement	3	3					
			Compensation, Rehabilitation and employment opportunity to the affected people	2	3					
			Provide all possible assistance to the displaced people until the displaced people are settled	3	3					
			Provide disturbance and rehabilitation cost	3	4					
			Protect traditional rights of locals	1	1					
			Compensate for any loss of crops, trees and other natural resources	3	3					
			Establish technical committee to assess damage caused by vibration for compensation	3	3					
	Reinstatement of damaged community services and infrastructures	Reinstatement of community services and infrastructures	Compensate or reinstate community assets such as temples, bridges and irrigation canals, electricity poles, telephone lines, drinking water pipes, sewerage lines, roads, trails, cremation sites etc	3	3					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
				Indicate in 1-5 scale	Indicate in 1-5 scale	Compliance (C); Non Compliance (NC) Not applicable (NA)				
						C			NC	NA
						<25%	25-50%	>75%		
	Influx of outside workforce, money and disharmony activity	Increase in crime and community stress	Instruct Workforce for not to indulge in Gambling and drinking alcohol	3	2					
			Prohibit Visiting of workers to nearby village after 7 pm and living outside	3	2					
			Instruct workforce to respect local culture, tradition, rights etc.	3	2					
			Request police to patrol in the camp site and adjoining villages	3	2					
			Launch awareness programs concerning the human trafficking and possibility of spread of STDs and HIV/AIDS	3	2					
	Project Activities relating to health and safety issues at work areas	Health and hygiene (unsafe working conditions, accidents, fire hazard, transmission of communicable disease)	Provide facilities of health check, proper sanitation and hygiene, health care, control of epidemic diseases to workforce	2	1					
			Provide awareness on STD, HIV/AIDS	2	1					
			Place adequate warning system, signboard, hoarding post and prohibit visiting risky area as necessary	2	1					
			Make available first aid kits ambulance and fire fighting gears	1	1					
			Make available protection gears to all construction workers and compensate for the loss of life or any type of injuries	1	1					
	Dislocation of archaeological artifacts, if any	Loss of Archaeological and cultural sites	Protect archaeological and cultural sites In case of relocation, consult local community	3	2					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
Preparation for construction				**Indicate in 1-5 scale**	**Indicate in 1-5 scale**	**Compliance (C); Non Compliance (NC) Not applicable (NA)**				
						C			**NC**	**NA**
						<25%	25-50%	**>75%**		
	Demolition of unnecessary structures	Decline in aesthetics and inconvenience to people	Remove all unnecessary structures and reinstall the facilities and others to the original condition	3	2					
	Traffic management at construction sites	Traffic Congestion	Provide information about construction schedule to the local people	3	2					

Space for additional remarks (if any):

Prepared by: **CTCE/KALIKA JV** Submitted to: **SMEC-Brisbane-AQUA-BDA-CEMAT**

Date of submission: **JUNE, 2014**

Note: *Scale 1. Very Good (all implemented); 2. Good (the majority implemented); 3. Fair (some implemented); 4. Poor (few implemented); 5. Very Poor (very few or no implemented*

LAB REPORT

SUMMARY

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 MAY 2015

Date	WEATHER Record							Temp.c	
	Sunny	Foggy	Windy	Cloudy	Morning Rain HRS	Night Rain Hrs.	Day Rain Hrs.	9:00 AM	Rain fall mm
1	Sunny							30.5	
2	Sunny							30.9	
3	Sunny							30.5	
4	Sunny							31.6	
5	Sunny							32.1	
6	Sunny							34	
7	Sunny							34.9	
8	Sunny							36.4	
9	Sunny							36.8	
10	Sunny							36.8	
11	Sunny					Night Rain Hrs.		26.8	14mm
12	Sunny							28.5	
13	Sunny							28.6	
14	Sunny					Night Rain Hrs.		28.4	12mm
15	Sunny							29.2	
16	Sunny					Night Rain Hrs.		28.4	26mm
17	Sunny				Morning Rain HRS	Night Rain Hrs.		28.2	30mm
18	Sunny							28	
19	Sunny							28.1	
20	Sunny				Morning Rain HRS	Night Rain Hrs.		27.8	24mm
21	Sunny							26.5	
22	Sunny					Night Rain Hrs.		27.4	22mm
23	Sunny							28.1	
24	Sunny				Morning Rain HRS	Night Rain Hrs.		28.4	32mm
25	Sunny				Morning Rain HRS	Night Rain Hrs.		28.2	34mm
26	Sunny							27.9	
27	Sunny							28.6	
28	Sunny							29.6	
29	Sunny				Morning Rain HRS			28.6	12mm
30	Sunny							27.4	
31	Sunny							26.8	

SMEC-Brisbane-AQUA-BDA-CEMAT	CTCE-KALIKA J/V
Approved by CSE	Submitted by Project Manager
Record Checked by Junior Engineer	Record Reported by Q.C Manager
Consultants Reps	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 MAY2015

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	MR78	3/4/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.2	22.2	
2	MR79	4/4/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.9	21.6	
3	MR80	5/4/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	22.4	
4	MR81	17/4/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.2	22.7	
5	MR82	18/4/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.6	22.6	
6	MR83	19/4/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.6	22.7	
7	MR84	22/4/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.5	22.7	
8	MR85	23/4/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.1	22.1	
9	MR86	26/4/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	22.0	
10	MR87	28/4/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	14.4	23.0	
										Total cube crushed 60 Nos on MAY			

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	CTCE-KALIKA J/V
Approved by Construction Supervision Engineer/CSE	Submitted by Project Manager
Test checked by Junior Engineer	Test conducted by Q.C Manager
Consultants Reps	Contractors Reps

Secondary Towns Integrated Uraban Environmental Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of MAY 2015

STIUEIP

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test)

Ref. STIUEIP LAB/	Date of Testing	Location	Chanage	BRAND NAME 1 st class brick	Water Absorption	Compressive Strength N/mm2	SCALE OF Sample From
MR218	6/5/2015	CN3	0+300	HIMAL		10.37	1500 Nos-5 Nos
MR219	11/5/2015	S13	L1	AMBEY		12.95	1500 Nos-5 Nos
MR220	12/5/2015	RANI	PAWAN MARG	AMBEY		11.31	1500 Nos-5 Nos
MR221	12/5/2015	RANI	PAWAN MARG	AMBEY		11.05	1500 Nos-5 Nos
MR222	13/5/2015	RANI	PAWAN MARG	AMBEY		11.33	1500 Nos-5 Nos
MR223	13/5/2015	RANI	PAWAN MARG	T&B		11.32	1500 Nos-5 Nos
MR224	13/5/2015	R5	1+100	AMBEY		11.24	1500 Nos-5 Nos
MR225	15/5/2015	RANI	PAWAN MARG	HIMAL		10.99	1500 Nos-5 Nos
MR226	15/5/2015	RANI	PAWAN MARG	HIMAL		11.47	1500 Nos-5 Nos
MR227	15/5/2015	CN3	L1A	SIIREE		12.28	1500 Nos-5 Nos

Specification	IS1077,IS2180or NS1/2035	I0%<	10N/MM2 ±5%

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

Test Checked by Junior Engineer

Consultantr Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractor Reps

Secondary Towns Integrated Uraban Environmental Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of MAY 2015

STIUEIP

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test)

Ref. STIUEIP LAB/	Date of Testing	Location	Chanage	BRAND NAME 1 st class brick	Water Absorption	Compressive Strength N/mm2	SCALE OF Sample From
MR238	19/5/2015	R2	4+175	SHREE		11.07	1500 Nos-5 Nos
MR239	19/5/2015	R2	4+175	SHREE		10.69	1500 Nos-5 Nos
MR240	19/5/2015	R5	SATH GHUMTI	AMBEY		11.54	1500 Nos-5 Nos
MR241	19/5/2015	R5	SATH GHUMTI	AMBEY		10.65	1500 Nos-5 Nos
MR242	19/5/2015	S13	L1F	AMBEY		10.52	1500 Nos-5 Nos
MR243	19/5/2015	S13	L1F	AMBEY		11.37	1500 Nos-5 Nos
MR244	19/5/2015	S13	L1F	SHREE		10.97	1500 Nos-5 Nos
MR245	19/5/2015	S13	L1F	SHREE		11.12	1500 Nos-5 Nos
MR246	20/5/2015	CN3	CN3	HIMAL		12.17	1500 Nos-5 Nos
MR247	20/5/2015	CN2	CN2	SHREE		10.74	1500 Nos-5 Nos

Specification	IS1077,IS2180or NS1/2035	I0%<	> 10N/MM2 ±5%

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

Test Checked by Junior Engineer

Consultantr Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractor Reps

Secondary Towns Integrated Uraban Environmental Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of MAY 2015

STIUEIP

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test)

Ref. STIUEIP LAB/	Date of Testing	Location	Chanage	BRAND NAME 1 st class brick	Water Absorption	Compressive Strength N/mm2	SCALE OF Sample From
MR248	21/5/2015	CN2	CN2	SHREE		11.18	1500 Nos-5 Nos
MR249	21/5/2015	CN2	CN2	HIMAL		11.41	1500 Nos-5 Nos
MR250	21/5/2015	R5	SATH GHUMTI	AMBEY		10.84	1500 Nos-5 Nos
MR251	21/5/2015	R5	SATH GHUMTI	AMBEY		10.43	1500 Nos-5 Nos
MR252	25/5/2015	S13L1F	0+330	AMBEY		11.83	1500 Nos-5 Nos
MR253	25/5/2015	R5	SATH GHUMTI	SHREE		11.38	1500 Nos-5 Nos
							1500 Nos-5 Nos
							1500 Nos-5 Nos
							1500 Nos-5 Nos
							1500 Nos-5 Nos
Specification				IS1077,IS2180or NS1/2035	I0%<	> 10N/MM2 ±5%	

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

Test Checked by Junior Engineer

Consultantr Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summary of Fine Concrete Aggregates Sand FOR THE MONTH OF MAY 2015

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Siza Distribution 10	4.75	2.36	1.18	0.6	0.3	0.15	Sp Gr	Water Absorption %	Unit Weight gm/cc	REMARKS
12	MAN HOLE CASTING YARD	MR68	100.0	91.40	79.81	57.83	41.46	22.58	4.90				source
13	SLAB CASTING YARD	MR69	100.0	90.94	79.12	57.35	41.66	23.09	5.64				om shree
14	KERB STONE CASTING YARD	MR70	100.0	91.38	77.96	56.65	40.24	21.56	3.95				
15	RANI CONCRETE WORK	MR71	100.0	93.78	81.46	57.78	41.99	20.57	4.67				
													crusher
													plant
Specifacation Limit is 383-1970 Zone -2			100-100	90-100	75-100	55-90	35-59	8-30	0-10				

SMEC-BRISBANE-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by Junior Engineer

Consultant Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BiratnagarSub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of MAY 2015

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
1	MR26	SHIVAM OPC G43	1/5/2015	34.90	255	315	All Cement
2	MR27	SHIVAM OPC G43	3/5/2015	34.30	240	330	Are
3	MR28	SHIVAM OPC G43	10/5/2015	34.90	250	345	Nepali
4	MR29	SHIVAM OPC G43	22/5/2015	34.90	250	345	BRAND
5	MR30	SHIVAM OPC G43	24/5/2015	33.70	265	370	OPC
6	MR31	SHIVAM OPC G43	25/5/2015	34.30	290	405	
Requirements in accordance with BS 12					> 45 Min.	10 Hrs	

SMCE-Brisbane-AQUA-BDA
Approved by C.S.E
Test Checked by Junior Engineer
Consultant Reps

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

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summery of Concrete Crushed Aggregate 20mm down **For The Month Of MAY 2015**

S.N.	DESCRIPTION / SOURCE	TYPE OF MAT.	LAB REF. NO.	Grain Siza Distribution				FI %	LAA %	ACV	Unit Wt %	Sp. Gr.	REMARKS
				25	20	10	4.75						
21	KERB STONE CASTING YARD	Cr Aggregates	MR76	100	98.45	44.86	5.92	13.93	32.52	19.2			Aggregates
22	KERB STONE CASTING YARD	Cr Aggregates	MR77	100	97.68	46.35	5.07	13.65		19.3			Source
23	RANI CONCRETE WORK	Cr Aggregates	MR78	100	97.19	49.30	5.33	13.89	32.08	19.5			Om shree
													Crusher
													Plant
Section 900:IS 383-1970 Required		Gradednominal size 20mm		100	95-100	25-55	0-10	Less 15%	Less 35%	Less 30%			

SMEC-Brisbane-AQUA-CEMAT-BDA	**CTCE-KALIKA J/V**
Approved by CSE M.k...	**Submitted by Project Manager**
Test Checked by Junior Engineer	**Test conducted by Q.C Manager**

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summery of Concrete Crushed Aggregate 20mm down For The Month Of MAY 2015

S.N.	DESCRIPTION / SOURCE	TYPE OF MAT.	LAB REF. NO.	Grain Siza Distribution				FI	LAA	ACV	Unit Wt	Sp. Gr.	REMARKS
				25	20	10	4.75	%	%		%		
1	R2Road 4+150 Concrete work	Cr Aggregates	MR57	100	97.05	34.60	5.15	12.86	34.04	18.7			Aggregates
2	R2Road 4+180 Concrete work	Cr Aggregates	MR58	100	97.35	35.29	5.35	12.58	33.64	18.5			Source
3	R2 Road 4+180 Concrete work	Cr Aggregates	MR59	100	97.91	34.31	5.11	13.46	32.76	18.8			Om shree
4	B1L1 RCC Concrete Work	Cr Aggregates	MR60	100	97.53	34.28	4.99	13.49	32.32	18.6			
5	B1L1 RCC Concrete Work	Cr Aggregates	MR61	100	97.88	30.51	5.60	12.83	32.12	18.2			
6	B1L1 RCC Concrete Work	Cr Aggregates	MR62	100	97.60	40.65 ~~40.85~~	5.09	12.68	32.40	18.0			Crusher
7	B2 RCC Concrete Work	Cr Aggregates	MR63	100	97.52	42.04	4.94	12.69	34.12	17.8			Plant
8	B2 RCC Concrete Work	Cr Aggregates	MR64	100	97.53	42.14	4.88	12.69		18.0			
9	B3 RCC Concrete Work	Cr Aggregates	MR65	100	97.96	44.04	4.64	12.69		18.2			
10	B3 RCC Concrete Work	Cr Aggregates	MR66	100.0	98.57	46.80	4.11	12.65	34.52	18.3			
Section 900:IS 383-1970 Required		Gradednominal size 20mm		100	95-100	25-55	0-10	Less 15%	Less 35%	Less 30%			

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by CSE

Test Checked by Junior Engineer

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summery of Concrete Crushed Aggregate 20mm down **For The Month Of MAY 2015**

S.N.	DESCRIPTION / SOURCE	TYPE OF MAT.	LAB REF. NO.	Grain Siza Distribution				FI	LAA	ACV	Unit Wt	Sp. Gr.	REMARKS
				25	20	10	4.75	%	%		%		
11	S13 Concrete Work	Cr Aggregates	MR67	100	98.15	46.89	4.40	13.80	33.80	18.7			Aggregates
12	S13 Concrete Work	Cr Aggregates	MR68	100	97.96	48.50	4.49	13.91		18.8			Source
13	CN2 Concrete Work	Cr Aggregates	MR69	100	97.97	49.37	4.83	13.29	32.04	18.6			Om shree
14	CN2 Concrete Work	Cr Aggregates	MR70	100	98.16	46.07	4.73	13.93		18.9			
15	CN3 Concrete Work	Cr Aggregates	MR70A	100	98.32	46.03	4.50	13.36	33.80	19.2			
16	CN3 Concrete Work	Cr Aggregates	MR71	100	98.32	46.03	4.50	12.79		18.9			Crusher
17	MAN HOLE CASNF YARD	Cr Aggregates	MR72	100	97.69	40.21	3.51	13.22	32.68	19.0			Plant
18	MAN HOLE CASNF YARD	Cr Aggregates	MR73	100	97.34	42.81	6.46	13.32		19.2			
19	SLAB CASTING YARD	Cr Aggregates	MR74	100	98.38	47.22	6.36	13.88	32.28	18.8			
20	SLAB CASTING YARD	Cr Aggregates	MR75	100.0	97.77	45.84	6.33	13.77		19.0			
Section 900:IS 383-1970 Required		Gradednominal size 20mm		100	95-100	25-55	0-10	Less 15%	Less 35%	Less 30%			

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by CSE

Test Checked by Junior Engineer

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summary of Fine Concrete Aggregates Sand FOR THE MONTH OF MAY 2015

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Siza Distribution 10	4.75	2.36	1.18	0.6	0.3	0.15	Sp Gr	Water Absorption %	Unit Weight gm/cc	REMARKS
1	R2 Road 4+150 Concrete work	MR57	100.0	87.68	77.36	58.45	43.27	18.34	4.58				source
2	R2 Road 4+170Concrete work	MR58	100.0	94.75	84.84	66.47	49.85	22.74	6.71				om shree
3	R2 Road 4+180Concrete work	MR59	100.0	94.09	84.44	66.43	50.29	22.91	6.48				
4	B1L1 RCC Concrete Workk	MR60	100.0	93.86	84.10	66.81	50.49	23.43	6.83				
5	B1L1 RCC Concrete Workk	MR61	100.00	94.44	81.77	63.82	47.86	21.79	4.56				
6	B1L1 RCC Concrete Workk	MR62	100.00	93.58	79.56	60.29	42.48	20.29	5.40				
7	B2L1 RCC Concrete Workk	MR63	100.00	93.33	79.73	61.09	43.81	22.45	5.85				
8	B3 RCC Concrete Work	MR64	100.00	92.95	80.42	61.23	45.95	23.24	5.74				
9	S13RCC Concrete Work	MR65	100.00	91.90	79.02	59.91	41.53	18.81	7.81				
10	CN2 RCC Concrete Work	MR66	100.00	92.02	79.29	57.21	38.50	15.18	4.14				crusher
11	CN3 RCC Concrete Work	MR67	100.00	94.03	82.23	60.92	41.66	21.57	4.34				plant
Specifacation Limit is 383-1970 Zone -2			100-100	90-100	75-100	55-90	35-59	8-30	0-10				

SMEC-BRISBANE-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by Junior Engineer

Consultant Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test Conducted by Q.C Manager

Contractor 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 MAY 2015

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by MASS				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	MR14	4/4/2015	M30 Work mix	MANHOLE YARD	0.38	1	1.4	2.3	SHIVAM	Om shree C/plant	21.6	32.1	
2	MR15	5/4/2015	M30 Work mix	MANHOLE YARD	0.38	1	1.4	2.3	SHIVAM	Om shree C/plant	21.9	32.6	
3	MR16	7/4/2015	M30 Work mix	MANHOLE YARD	0.38	1	1.4	2.3	SHIVAM	Om shree C/plant	22.2	31.6	
4	MR17	10/4/2015	M30 Work mix	MANHOLE YARD	0.38	1	1.4	2.3	SHIVAM	Om shree C/plant	21.5	32.4	
5	MR18	12/4/2015	M30 Work mix	MANHOLE YARD	0.36	1	1.28	2.14	SHIVAM	Om shree C/plant	22.2	32.7	New mix Proportion
6	MR19	13/4/2015	M30 Work mix	MANHOLE YARD	0.36	1	1.28	2.14	SHIVAM	Om shree C/plant	24.1	32.7	
7	MR20	15/4/2015	M30 Work mix	MANHOLE YARD	0.36	1	1.28	2.14	SHIVAM	Om shree C/plant	22.2	32.3	
8	MR21	17/4/2015	M30 Work mix	MANHOLE YARD	0.36	1	1.28	2.14	SHIVAM	Om shree C/plant	22.9	33.0	
9	MR22	19/4/2015	M30 Work mix	MANHOLE YARD	0.36	1	1.28	2.14	SHIVAM	Om shree C/plant	22.6	31.8	
10	MR23	20/4/2015	M30 Work mix	MANHOLE YARD	0.36	1	1.28	2.14	SHIVAM	Om shree C/plant	21.6	33.3	
11	MR24	23/4/2015	M30 Work mix	MANHOLE YARD	0.36	1	1.28	2.14	SHIVAM	Om shree C/plant	21.9	31.9	
12	MR25	25/4/2015	M30 Work mix	MANHOLE YARD	0.36	1	1.28	2.14	SHIVAM	Om shree C/plant	22.2	32.6	
13	MR26	27/4/2015	M30 Work mix	MANHOLE YARD	0.36	1	1.28	2.14	SHIVAM	Om shree C/plant	22.4	32.1	
										Total cube crushed 78 NOS			

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 Junior Engineer

Consultants Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractors Reps

SECONDARY TOWN INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar-Sub-Metropolitant City

SUMMERY OF THE MORTAR WORK MIX CUBE FOR THE MONTH OF MAY 2015

S.N.	Cube No.	Name of Cement	Location/Structure	Details of MIX	Casting Date	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	169	Shivam	Sewerage National Trading	1:4 by volume	4/4/2015	30.00	135	235	11/4/2015	7.62	1/5/2015	9.52	
2	170	Shivam	RANI L4L5	1:4 by volume	4/4/2015	30.00	135	235	11/4/2015	6.39	1/5/2015	7.89	
3	171	Shivam	Sewerage National Trading	1:4 by volume	4/4/2015	30.00	135	235	11/4/2015	6.26	1/5/2015	7.76	
4	172	Shivam	Sewerage line Yadev Chowck	1:4 by volume	4/4/2015	30.00	135	235	11/4/2015	7.07	1/5/2015	8.03	
5	173	Shivam	Sewerage line Prativa Chowck	1:4 by volume	4/4/2015	30.00	135	235	11/4/2015	7.48	1/5/2015	8.44	
6	174	Shivam	Sewerage line Prativa Chowck	1:4 by volume	11/4/2015	30.00	135	235	18/4/2015	7.62	9/5/2015	9.12	
7	175	Shivam	Sewerage line Yadev Chowck	1:4 by volume	15/4/2015	30.00	135	235	22/4/2015	6.80	13/5/2015	7.89	
8	176	Shivam	Sewerage line JATUWA Chowck	1:4 by volume	16/4/2015	30.00	135	235	23/4/2015	7.07	14/5/2015	8.30	
9	177	Shivam	Sewerage National Trading	1:4 by volume	16/4/2015	30.00	135	235	23/4/2015	7.62	14/5/2015	8.03	
10	178	Shivam	Sewerage National Trading	1:4 by volume	17/4/2015	30.00	135	235	24/4/2015	7.21	16/5/2015	8.84	
11	179	Shivam	Sewerage National Trading	1:4 by volume	17/4/2015	30.00	135	235	24/4/2015	6.80	16/5/2015	8.57	
12	180	Shivam	Sewerage line JATUWA Chowck	1:4 by volume	17/4/2015	30.00	135	235	24/4/2015	7.21	16/5/2015	8.44	
13	181	Shivam	Sewerage National Trading	1:4 by volume	22/4/2015	30.30	210	315	29/4/20105	6.80	20/5/2015	8.30	
14	182	Shivam	Sewerage line JATUWA Chowck	1:4 by volume	22/4/2015	30.30	210	315	29/4/2015	6.26	20/5/2015	8.57	
15	183	Shivam	CN3 L1	1:4 by volume	27/4/2015	30.30	210	315	4/5/2015	7.76	25/5/2015	9.66	
16	184	Shivam	RANI	1:4 by volume	28/4/2015	30.30	210	315	5/5/2015	5.99	26/5/2015	9.52	
17	185	Shivam	RANI	1:4 by volume	28/4/2015	30.30	210	315	5/5/2015	6.12	26/5/2015	9.80	
18	186	Shivam	Sewerage National Trading	1:4 by volume	28/4/2015	30.30	210	315	5/5/2015	6.39	26/5/2015	10.07	
19	187	Shivam	Sewerage National Trading	1:4 by volume	29/4/2015	30.30	210	315	6/5/2015	5.85	27/5/2015	8.84	
20	188	Shivam	Sewerage National Trading	1:4 by volume	29/4/2015	30.30	210	315	6/5/2015	5.85	27/5/2015	8.84	
										Total cube crushed 120nos			

According to is 2250-1981

MIN 45m Max 600m Required strength on 28 days not less than 5 or 7.5 N/MM2

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer/CSE

Test Checked by Junior Engineer

Consultants Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractore 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 MAY 2015

Date	WEATHER Record							Temp.c	
	Sunny	Foggy	Windy	Cloudy	Morning Rain HRS	Night Rain Hrs.	Day Rain Hrs.	9:00 AM	Rain fall mm
1	Sunny							30.5	
2	Sunny							30.9	
3	Sunny							30.5	
4	Sunny							31.6	
5	Sunny							32.1	
6	Sunny							34	
7	Sunny							34.9	
8	Sunny							36.4	
9	Sunny							36.8	
10	Sunny							36.8	
11	Sunny					Night Rain Hrs.		26.8	14mm
12	Sunny							28.5	
13	Sunny							28.6	
14	Sunny					Night Rain Hrs.		28.4	12mm
15	Sunny							29.2	
16	Sunny					Night Rain Hrs.		28.4	26mm
17	Sunny				Morning Rain HRS	Night Rain Hrs.		28.2	30mm
18	Sunny							28	
19	Sunny							28.1	
20	Sunny				Morning Rain HRS	Night Rain Hrs.		27.8	24mm
21	Sunny							26.5	
22	Sunny					Night Rain Hrs.		27.4	22mm
23	Sunny							28.1	
24	Sunny				Morning Rain HRS	Night Rain Hrs.		28.4	32mm
25	Sunny				Morning Rain HRS	Night Rain Hrs.		28.2	34mm
26	Sunny							27.9	
27	Sunny							28.6	
28	Sunny							29.6	
29	Sunny				Morning Rain HRS			28.6	12mm
30	Sunny							27.4	
31	Sunny							26.8	

SMEC-Brisbane-AQUA-BDA-CEMAT	CTCE-KALIKA J/V
Approved by CSE	Submitted by Project Manager
Record Checked by Junior Engineer	Record Reported by Q.C Manager
Consultants Reps	Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M15/20,M20/20& M25/20 Work Mix

FOR THE MONTH OF MAY 2015

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by VOLUME				Type of Material		Cube Crushing ,N/mm2		Remarks
				Structure	Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
21	232	20/4/2015	M20 Work mix	B3 RCC SHARE WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.44	22.37	
22	233	22/4/2015	M20 Work mix	B3 RCC SHARE WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	18.30	22.96	
23	234	22/4/2015	M20 Work mix	S11 RCC SHARE WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	17.56	22.44	
24	235	23/4/2015	M20 Work mix	B3 RCC SHARE WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.89	22.96	
25	236	27/4/2015	M20 Work mix	S11 RCC SHARE WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	18.89	21.19	
26	237	27/4/2015	M20 Work mix	B1 RCC SHARE WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	18.07	22.37	

Total 156 NOS cube crushed MAY

Specifacation Limit Table For M15/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	10.05	15
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

SMEC-Brisbane-AQUA-BDA	CTCE-KALIKA J/V
Approved by Construction Supervision Engineer/CSE	Submitted by Project Manager
Test checked by Junior Engineer	Test conducted by Q.C Manager
Consultants Reps	Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M15/20,M20/20& M25/20 Work Mix

FOR THE MONTH OF MAY 2015

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	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	212	3/4/2015	M20 Work mix	Sewarage Line T2National Trading	0.50	1	2	3.5	Shivam	Om shree C/plant	16.59	22.15	
2	213	4/4/2015	M20 Work mix	Sewarage Line T2National Trading	0.50	1	2	3.5	Shivam	Om shree C/plant	17.19	22.00	
3	214	4/4/2015	M20 Work mix	RANI PCC BED	0.50	1	2	3.5	Shivam	Om shree C/plant	17.56	21.70	
4	215	4/4/2015	M20 Work mix	Sewarage line	0.50	1	2	3.5	Shivam	Om shree C/plant	17.41	22.22	
5	216	5/4/2015	M20 Work mix	B3L1A Share Wall	0.50	1	2	3.5	Shivam	Om shree C/plant	15.85	22.22	
6	217	5/4/2015	M15 Work Mix	B3 Leanear Concrete	0.52	1	2.5	4	Shivam	Om shree C/plant	12.44	22.22	
7	218	5/4/2015	M20 Work mix	Sewarage Line	0.50	1	2	3.5	Shivam	Om shree C/plant	14.22	22.96	
8	219	5/4/2015	M20 Work mix	B1L1 Share Wall	0.50	1	2	3	Shivam	Om shree C/plant	14.96	21.63	
9	220	8/4/2015	M20 Work mix	B3L1A Share Wall	0.50	1	2	3.5	Shivam	Om shree C/plant	18.15	24.30	
10	221	9/4/2015	M15Work mix	B1 Leanear Concrete	0.52	1	2.5	4	Shivam	Om shree C/plant	11.78	15.48	
11	222	11/4/2015	M20 Work mix	B3L1RCC Share wall	0.50	1	2	3.5	Shivam	Om shree C/plant	15.85	21.85	
12	223	12/4/2015	M20 Work mix	B3L1RCC Share wall	0:50	1	2	3.5	Shivam	Om shree C/plant	16.00	21.93	
13	224	13/4/2015	M15Work mix	B3 Leanear Concrete	0.52	1	2.5	4	Shivam	Om shree C/plant	13.56	16.59	
14	225	15/4/2015	M20 Work mix	Sewarage Line T2Prativa Chowck	0.50	1	2	3.5	Shivam	Om shree C/plant	15.11	23.56	
15	226	15/4/2015	M20 Work mix	Sewarage Line T2National Trading	0.50	1	2	3.5	Shivam	Om shree C/plant	14.96	21.56	
16	227	15/4/2015	M20 Work mix	B3L1 RCC Share Wall	0.50	1	2	3.5	Shivam	Om shree C/plant	15.70	22.22	
17	228	15/4/2015	M20 Work mix	B3L1 RCC Share Wall	0.50	1	2	3.5	Shivam	Om shree C/plant	15.70	22.89	
18	229	17/4/2015	M20 Work mix	B1L1 RCC Share Wall	0.50	1	2	3.5	Shivam	Om shree C/plant	15.56	22.96	
19	230	17/4/2015	M20 Work mix	Sewarage Line	0.50	1	2	3.5	Shivam	Om shree C/plant	15.41	22.07	
20	231	20/4/2015	M20 Work mix	B2 DPS Line out let RCC share wall	0.50	1	2	3.5	Shivam	Om shree C/plant	16.67	23.70	

Specifacation Limit Table For M15/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	10.05	15
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

SMEC-Brisbane-AQUA-BDA

Approved by Construction Supervision Engineer/CSE

Test checked by Junior Engineer

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

Monthly Laboratory Testing Report

(For The Month OF MAY 2015)

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		
		Water Content	2	0	0			2	
		Loss on Heating for 5 hrs	2	0	0			2	
		Pen- of residue after loss on Heating		0	0			2	
		Solubility in tricloroethylene	2	0	0			2	
15	Humpipe Test	Three Edge Bearing Load Test	2	0	0			2	200mm to 1600mm 1 each
16	Marshall Stability Test	Bulk density							
		Stability							
		Flow							
		Air voides							
		Bitumen extraction							
		Voids in Mineral Agg							
		Job mix in AC Plant							
		Oore Field Density							
17	BITUMEN SPREAD TEST								
	Prime coat	Application rate							
	Tack coat	Application rate							
18	Machines/Equipment								
	Caliberation of compressive		2						2
	Testing machine								
	1000&500 KN Manuall								
19	MISCELLANEOUS								
	G.I Wire(Gabion Boxes)		5						5
	Factory Test Report of Cement		8						8
	Factory Test Report of Iron Steel		4						4
	Factory Test Report of 80/100 Bitumen		2						2
	Factory Test Report of UPVC/HDP Pipe		2						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

AIV=Aggregate Impact Value

JMC=Job Mix Formula

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by C.S.E

Checked by Junior Engineer

Consultant Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Prepaid by Q.C Manager

Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

Monthly Laboratory Testing Report

(For The Month OF MAY 2015)

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		
		PI	2	0	0	0		2	
		CBR	2	0	0	0		2	
		Field density							
11	Back Fill Material	Sieve analysis							
		MDD & OMC							
		Field density							
		CBR							
12	CS Base	Sieve analysis	2	0	0	0		2	
	Crushed Stone Base	MDD & OMC	2	0	0	0		2	
	Material Laying	C.B.R	2	0	0	0		2	
		FI + EI	1	0	0	0		1	
		LAA	1	0	0	0		1	
		SSS	0	0	0	0		0	
		ACV/AIV	1	0	0	0		1	
		Field Density							
13	ASHPHALT CONCRETE	Sieve analysis							
	Combine Mixed	FI / EI							
		ACV							
	Individual Ca&FA Test	LAA							
		Unit weight							
		SSS							
14	BITUMEN TEST	Penetration at25.c	2	0	0			2	
	80/100 Bitumen	Softeing point(ring ball)	2	0	0			2	
	As per DORbook section	Flash point/Fire Point	2	0	0			2	
	600 Table 6.14/is 73	Ductility at25.c	2	0	0			2	
		Specific at 25.c	2	0	0			2	

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

Monthly Laboratory Testing Report

(For The Month OF MAY 2015)

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	2	0	0	0		2	
		MDD & OMC							
		C.B.R							
		Field Density							
2	SUB GRADE Preparation asPere. Specifacation	MDD & OMC	4	0	0	0		4	
		Field density	3	0	0	0		3	
		C.B.R	4	0	0	1		5	
3	BRICK WORK	Water Absorption	185	0	0	0		185	
	Required Test	Compressive Strength	1108	180	180	0		1288	
4	Masonry Mortar (CM 7.05)	Compressive strength	972	120	120	0		1092	
5	CONCRETE AGGREGATE								
	Coarse aggregate (20 mm)	Sieve analysis (20 mm)	56	23	23	0		79	
		LAA	36	15	15	0		51	
		Specific Gravity	8	0	0	0		8	
		FI / EI	50	23	23	0		73	
		ACV	35	23	23	0		58	
		SSS							
		Unit weight	2	0	0	0		2	
	Fine aggregate (Sand)	Sieve analysis	55	15	15	0		70	
		Sand Equivalent Test(S.E)							
		Unit weight	2	0	0	0		2	
6	CONCRETE MIX DESIGN	Concrete mix Design	70	5	4	1		75	
	ConcreteM15/20,M20/20	Compressive strength	414	24	18	6		438	
	M25/20,&M30/20	Slump test	72	0	0	0		72	
7	CEMENT Required Test								
	OPC Cement	Setting time	25	6	6	0		31	
		Normal Consistency	25	6	6	0		31	
		Compressive strength	38	0	0	0		38	
8	CONCRETE								
	Work Mix Test M15,M20,M25,M30	Compressive strength	1753	330	330	0		2083	
9	REINFORCEMENT	Required Test							8,10,12,16
	Reinforcement tore steel	As per Specifacation	5	0	0	0		5	20,25 mm dia
10	PAVEMENT MATERIALS								
	Sub Base Materials	Sieve analysis	2	0	0	0		2	
		MDD & OMC	2	0	0	0		2	