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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		280.00	532.00	252.00	250.00	
	B1L2A	465.77		150.00	150.00	-		
	B1L2F	371.22		300.00	370.00	70.00		
						-		
B2	B2L1	1425	3742	730.00	833.00	103.00	150.00	
	B2L2	828.03		120.00	300.00	180.00	150.00	
	B2L2C	639.22		631.00	631.00	-		
	B2L1B	849.47		300.00	750.00	450.00	80.00	
						-		
B3	B3L1A	422.96	3514	420.96	420.96	-		
	B3L1B	421.1		421.10	421.10	-		
	B3L1	669.7		70.00	145.00	75.00	150.00	
	B3L2	691.56		348.00	552.00	204.00	100.00	
	B3L2E	220.42		200.00	200.00	-		
	B3L3	578.74		408.00	483.00	75.00	70.00	
	B3L4	509.5		509.50	509.50	-		
						-		
S9	S9L1	2981.85	3178	542.00	650.00	108.00	100.00	
						-		
S11	S11L1	794	2092	794.00	794.00	-		
	S11L1A	265.75		83.00	83.00	-		
	S11L1B	107.5		107.50	107.50	-		
	S11L2	924.3		273.00	273.00	-	100.00	
						-		
S13	S13L2	1001	4555	450.00	605.00	155.00	200.00	
	S131A	718.33		700.00	700.00	-		
	S13L1B	276		276.00	276.00	-		
	S13L1C	284		284.00	284.00	-		
	S13L1D	535.04		300.00	350.00	50.00	100.00	
	S13L1E	572.02		100.00	100.00	-	100.00	
	S13L1F	524		40.00	295.00	255.00		
	Hume Pip	645		100.00	137.50	37.50	200.00	4 manhole
						-		
CN2	CN2L2	949.23	2273	550.00	705.00	155.00	350.00	
						-		
CN3	CN3L1	715.91	2170	550.00	550.00	-	100.00	
	CN3L2	997.5		100.00	325.00	225.00	220.00	
						-		
Rani	L5	819	8483	220.00	750.00	530.00	750.00	
Drain	R2	4700	4700	2,500.00	3,250.00	750.00	1,000.00	
Total Length					**17,731.54**	**3,674.50**		

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 Trumk 1000 dia hume pipe			1729	164.00	372.50	208.50	495.00					
T2 Trumk 900 dia hume pipe			489		10.00	10.00	350.00					
						-						
T2 Sec	L 18 & 19					-						
Line 19 400 dia Hume Pipe			487		75.00	75.00						
	19f		17167	125.00	125.00	-		3.00				
	19h			176.00	176.00	-		4.00				
	19q			229.00	229.00	-		6.00				
	19s			262.00	262.00	-		7.00				
	19r			257.00	257.00	-		6.00				
	19t			175.00	175.00	-		4.00		18.00	145.00	
								-				
T3 Trunk 700 dia hume Pipe			1472		85.00	85.00	800.00					
T3 Sec			22664			-		-				
	Line 31			157.00	157.00	-		4.00				
	Line 32			200.00	200.00	-		5.00				
	Line 33			208.00	208.00	-		5.00				
	Line 34			208.00	208.00	-		5.00	8.00	6.00		
	Line 35			217.00	217.00	-		5.00	10.00	7.00		
	Line 26F			149.00	149.00	-		4.00				
	Line 26C			190.00	190.00	-		5.00				
	Line 26E			130.00	130.00	-		3.00				
	Line 26			68.00	68.00	-		2.00				
						-						
Total Length					**2,306.00**	**378.50**		**68.00**		**31.00**	**145.00**	

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	Doors, windows, electrical, sanitary fittings, priming and other finishing works		Complete of all Building works	
5	Workshop Building & Generator/Changing Building, WWTP, Jatuwa	Doors, windows, electrical, sanitary fittings, priming and other finishing works		Complete of all Building works	
6	Sump Well	Excavation of Sump Well up to 3 m depth		Complete of Excavation and Concreting	

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	18253	19803	1550	
2	Precuts	Nos.	2983	3523	540	
3	Kerb Stone	Nos.	4962	5812	850	

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

Daily Hume Pipe Production for the Month February 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	128	90	110	52	126	475	590	150	370	169
This Month Production	0	12	20	31	21	37	101	126	34	64	16
Total Production	1562	140	110	141	73	163	576	716	184	434	185

6.2 Financial Progress and Cash Flow

Detail of payment:

Installment Number	Local currency payment(NRs.)	Remarks
IPC 01	200,940,000.00	Advance Payment 01
IPC 02	26,153,522.05	IPC 2
IPC 03	44,607,766.15	IPC 3
IPC 04	39,663,279.36	IPC 04
IPC 05	20,690,415.01	IPC 05
IPC 06	74,269,669.35	IPC 06
IPC 07	60,524,503.35	IPC 07
Total=	**265,909,155.27**	

7 Details of Safeguard activities

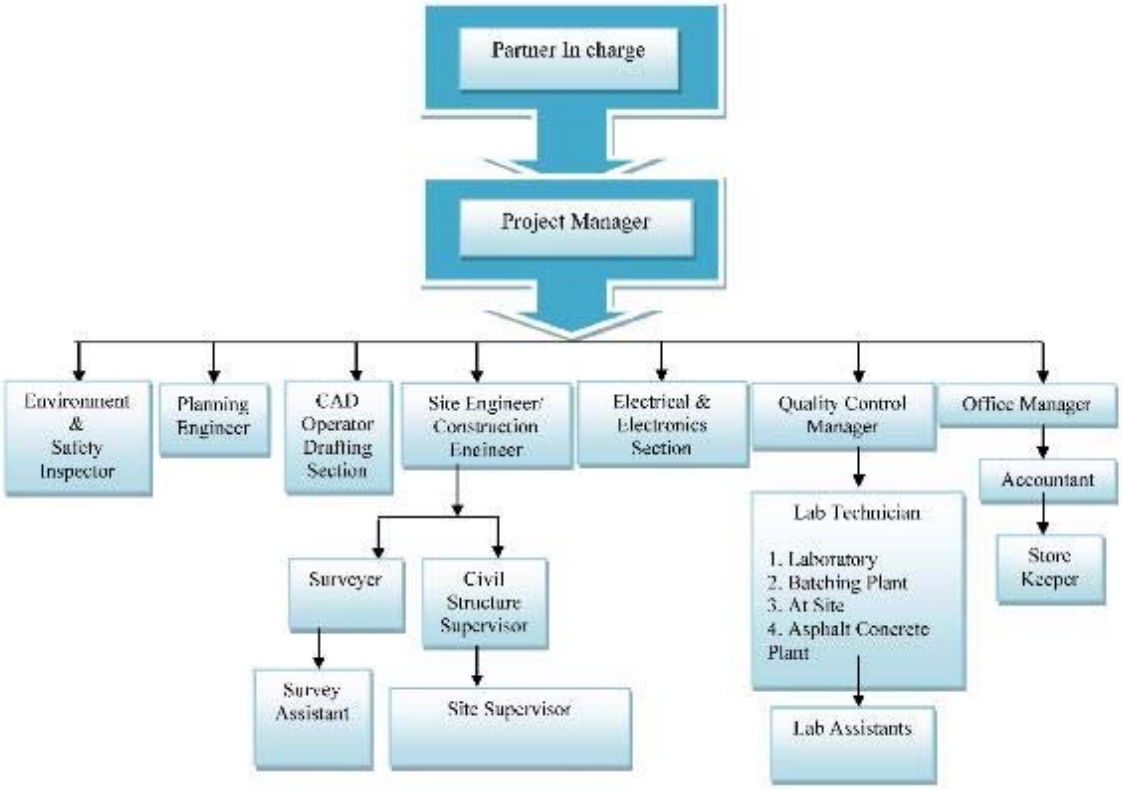
Till the date no such issues have been faced relating to the Social, Environmental and Resettlement matter.

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.

9 Work Plan Professional input



S.N.	Name	Designation	Attendance Days
1	Mr. Ujjwol Prasai	Project Manager	25
2	Mr. Santosh Pudasaini	Planning/ Construction Engineer	25
3	Mr. Mahesh Subedi	Construction Engineer	25
4	Mr. Umesh Kumar Dangol	Site Engineer	25
5	Uddhav Bhatta	Site Engineer	25
6	Robin Rijal	Site Engineer	25
7	Subas Pokhrel	Site Engineer	25
8	Dataram Gelal	Site Engineer	12
9	Sujeet Dahal	Office/ Bill Engineer	18
10	Debesh Chaudhary	Site Engineer	10
11	Niraj Raut	Site Engineer	14
12	Sunil Chaudhary	Quality Control Manager	25
13	Mr. Vishwo Bandhu Mainali	Accountant/ Office Manager	25

14	Mr. Narayan Rijal	Senior Site Supervisor/Safety Manager	20
15	Mr. Suman Tamang	Junior Engineer	25
16	Anil Pokhrel	Junior Engineer	24
17	Sujan Singh Thakuri	Junior Engineer	15
18	Anil Ghimire	Junior Engineer	15
19	Hemanta Bista	Junior Engineer	14
20	Suman Tamang	Junior Engineer	20
21	Gaurab Subba	Sub-Overseer	25
22	Prakash Bhattrai	Sub-Overseer	25
23	Saroj Shrestha	Junior Engineer	25
24	Shree Kumar Khulal	Junior Engineer	20
25	Suman Shrestha	Junior Engineer	25
26	Dinesh Rai	Junior Engineer	25
27	Bishal Shrestha	Junior Engineer	25
28	Sanjay Shrestha	Junior Engineer	25
29	Nabin Tamang	Junior Engineer	25
30	Pradip Rai	Sub-Overseer	20
31	Dipesh Dahal	Lab Assistant	25
32	Ramesh Koirala	Lab Assistant	25
33	Mahakanta Risidev	Lab Assistant	25
34	Prasasan Rajbansi	Supervisor	25
35	Sandeep Pyakurel	Light Driver (7621)	24
36	Ram Hari Ariyal	Light Driver (1082)	14
37	Kiran Manandhar	Light Driver (1086)	25
38	Mangal Kisku	JCB Operator	25
39	Surya Bdr. Malla	Loader Operator	17
40	Rupana Chaudhary	TM Driver	25
41	Bhabesh Rai	Batching Operator	20
42	Chandan Roy	Pc-200 Operator	25
43	Jeet Bdr Gurung	Teller (4423) Driver	25
44	Ananda Rajbansi	Electrician	25
45	Santosh Mukhiya	Electrician	25
46	Pappu Yadav	Mechanic	25

47	Mukesh Mandal	Mechanic	25
48	Bhanu Bhakta Kafle	Plumber	22
49	Ganga Ram Dhital	Plumber	25
50	Nabin Dhakal	Store Kepper	25
51	Bhabesh Rai	Store Assistant	25
52	Niroj K. Puri	TM Driver(7561)	20
53	Dhan Kaji Gurung	TM Helper	25
54	Indra RajBansi	Tractor Driver (6204)	25
55	Kartik Thrau	Tractor Driver (8304)	25
56	Tilak Ghalan	Transit mixer Driver	25
57	Nakkul Paddhar	Tanker Driver	25
58	Udit Narayan	Tanker Driver	25
59	Basudev Yadav	Tractor Driver	25
60	Sudeep Rajbansi	Survey Helper	25
61	Satya Dhimal	Light Driver	25
62	Dip Budathoki	Light Driver	25
63	Sabita Thapa	Sub-Overseer	15
64	Angira Rai	Sub-Overseer	15
65	Sita Thapa	Kitchen Helper	25
66	Pabitri Rishidev	Kitchen Helper	25
65	Kabita Kadel	Kitchen Helper	25
66	Chetana Karki	Kitchen Helper	14
67	Pabitra Tamang	Kitchen Helper	25

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	12		
2.	Plumber	4		
	Electrician	4		
3.	Bar Bender	12		
4.	Wielder	16		
5.	Scaffold	6		
6.	Drivers	14		
Unskilled Labor				
	Labor	**Male**	**Female**	
1.	Labors (Skilled)	78	8	
2.	Labors (Unskilled)	154	35	

10 Conclusion

Sewer Trunk Lines laying has started form several parts. Similarly, precast chambers installation at right of way cleared sites has started. Drain construction is undertaking at every lines.

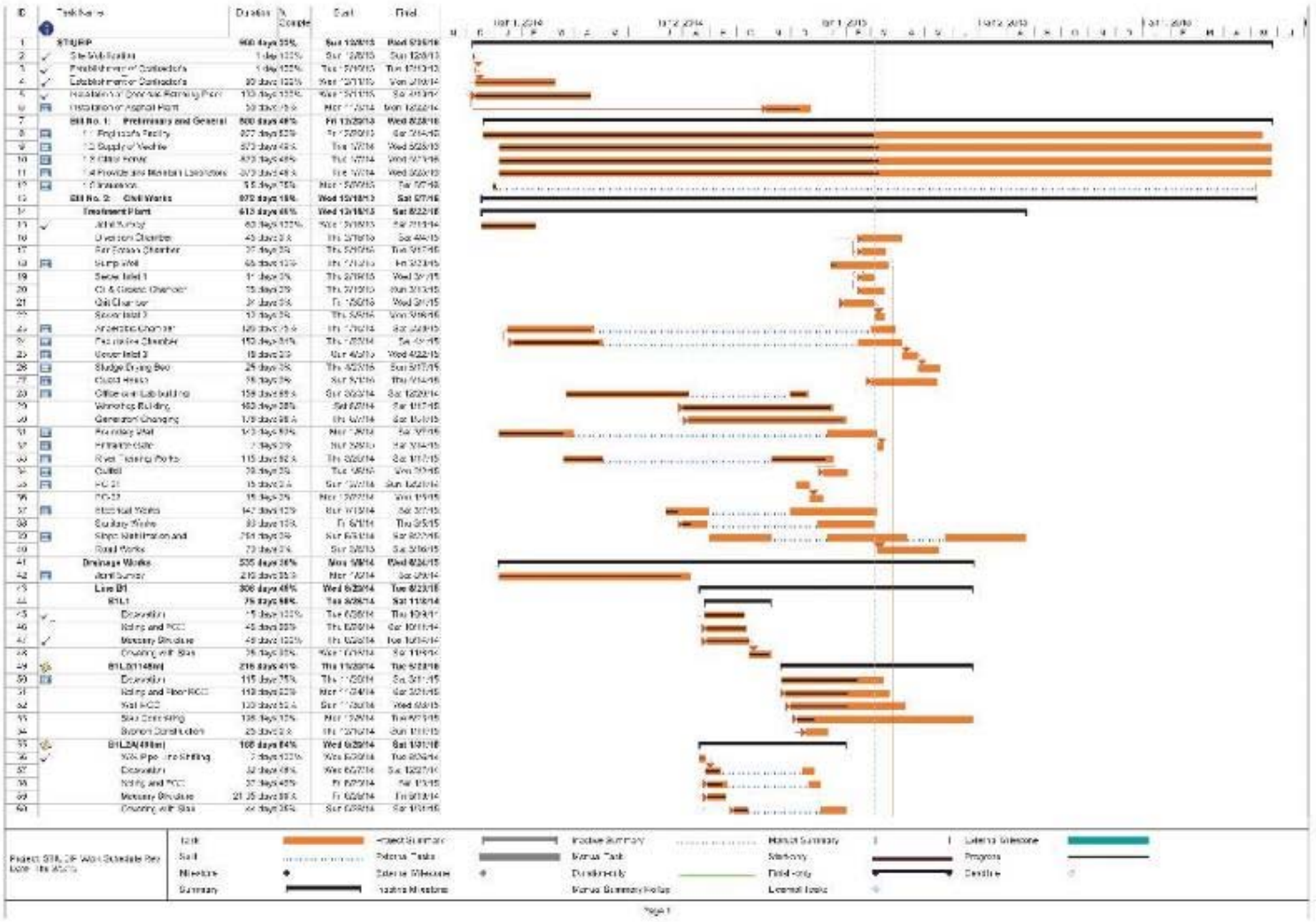
At the key working season, contractor's resources are mobilized to full extent. Multiple sites are underway at several places of Biratnagar but they are obstructed due to unavailability of Site Possession. If all sites are possessed, the project can be completed on time.

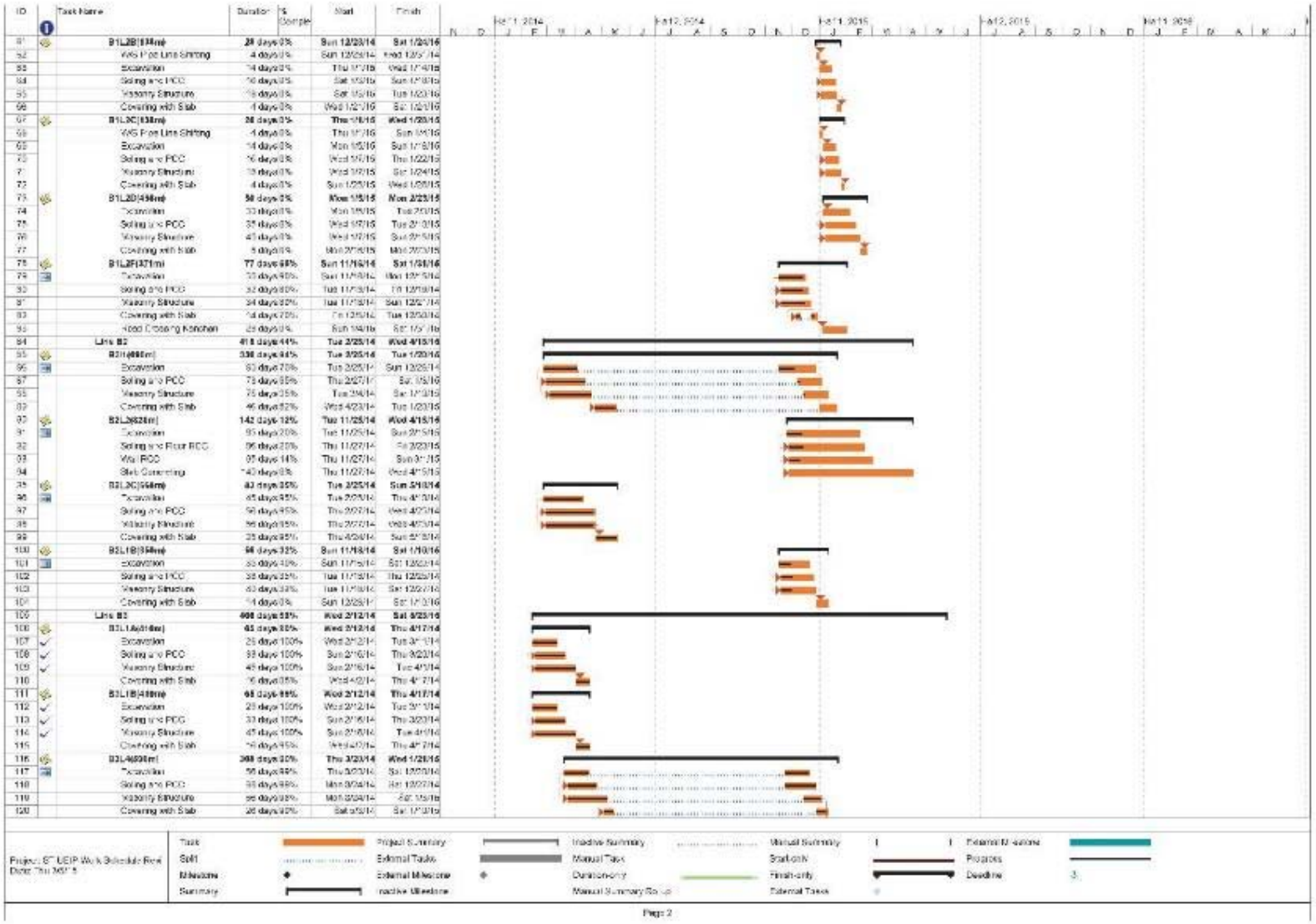
ANNEX

S – Curve

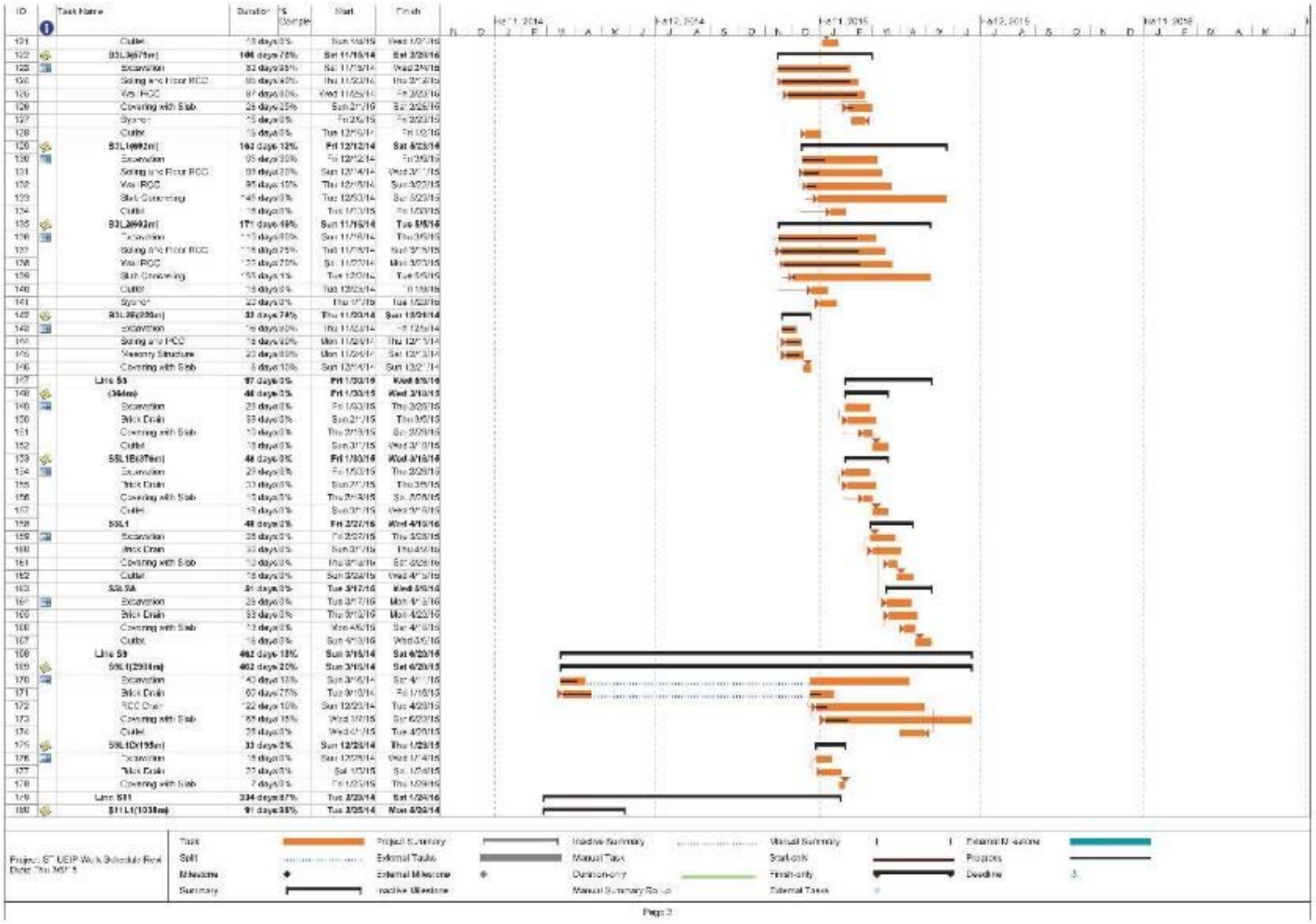
Contract Amt		2,119,054,525.90																																					
Item No.	Description	Amount (NRs)	Relative Weight in %	Year	2013	Year 2014													Year 2015												Year 2016									
				Month	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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	0.013	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	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	0.000	0.000	0.000	0.000	0.000	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	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	0.065	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	0.000	0.000	0.000	0.000	0.000	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	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	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	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	0.000						
	Total	2,119,054,525.90	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	0.000	0.000	0.000	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	17.310	17.310	17.310	17.310	17.310	17.310	17.310	17.310	17.310	17.310	17.310	17.310	17.310	17.310	17.310						

Work Schedule and Progress

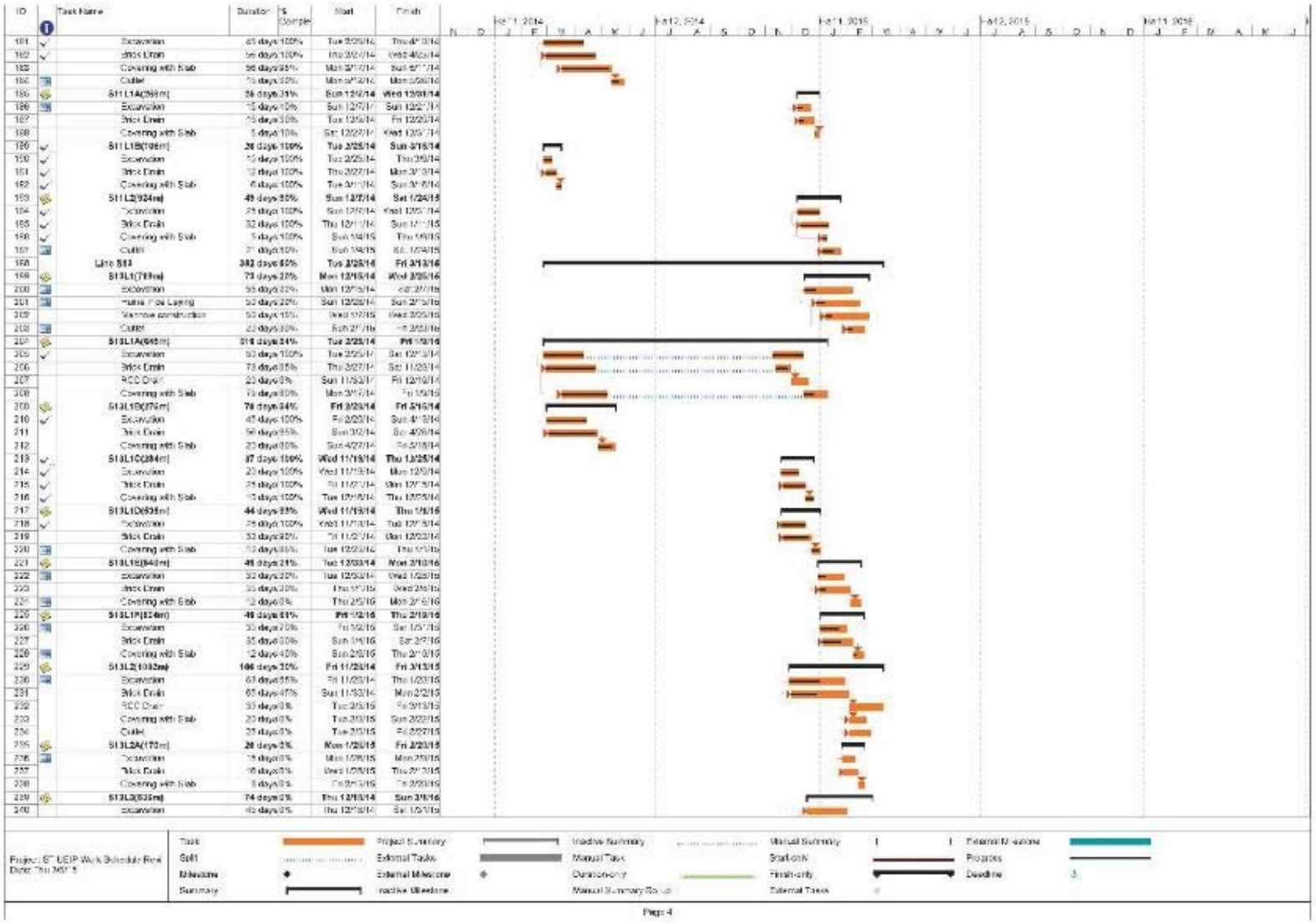


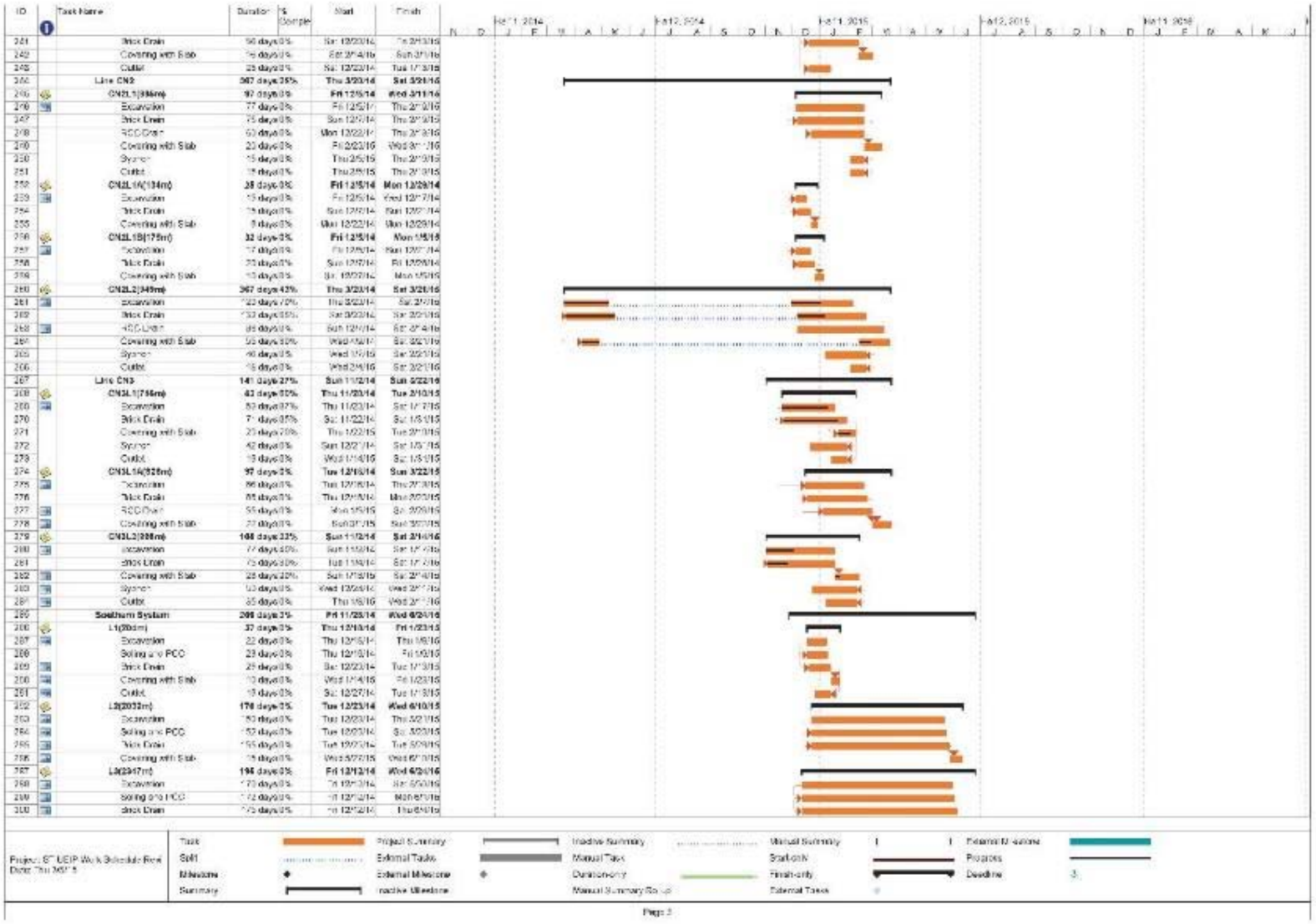


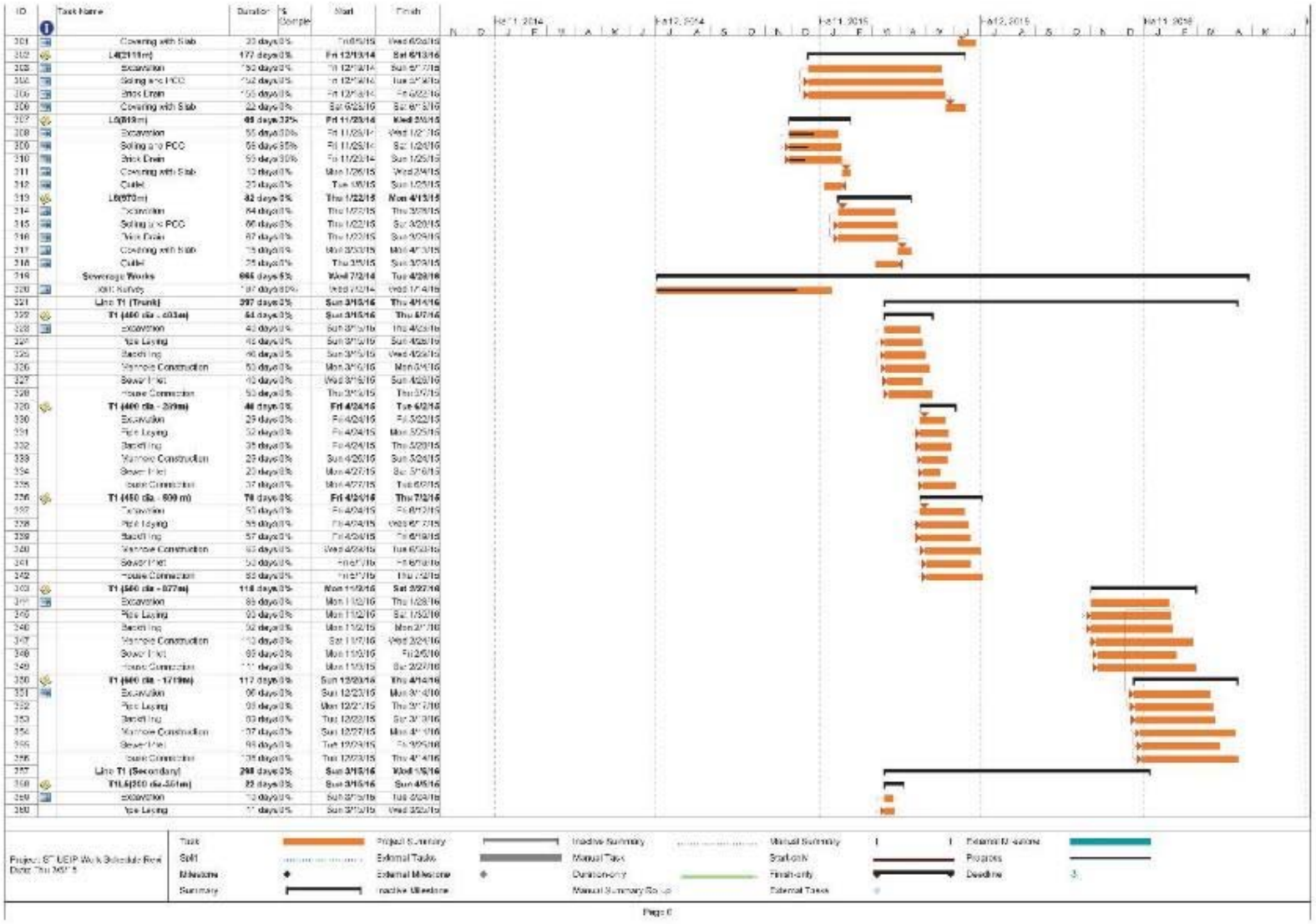
Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi



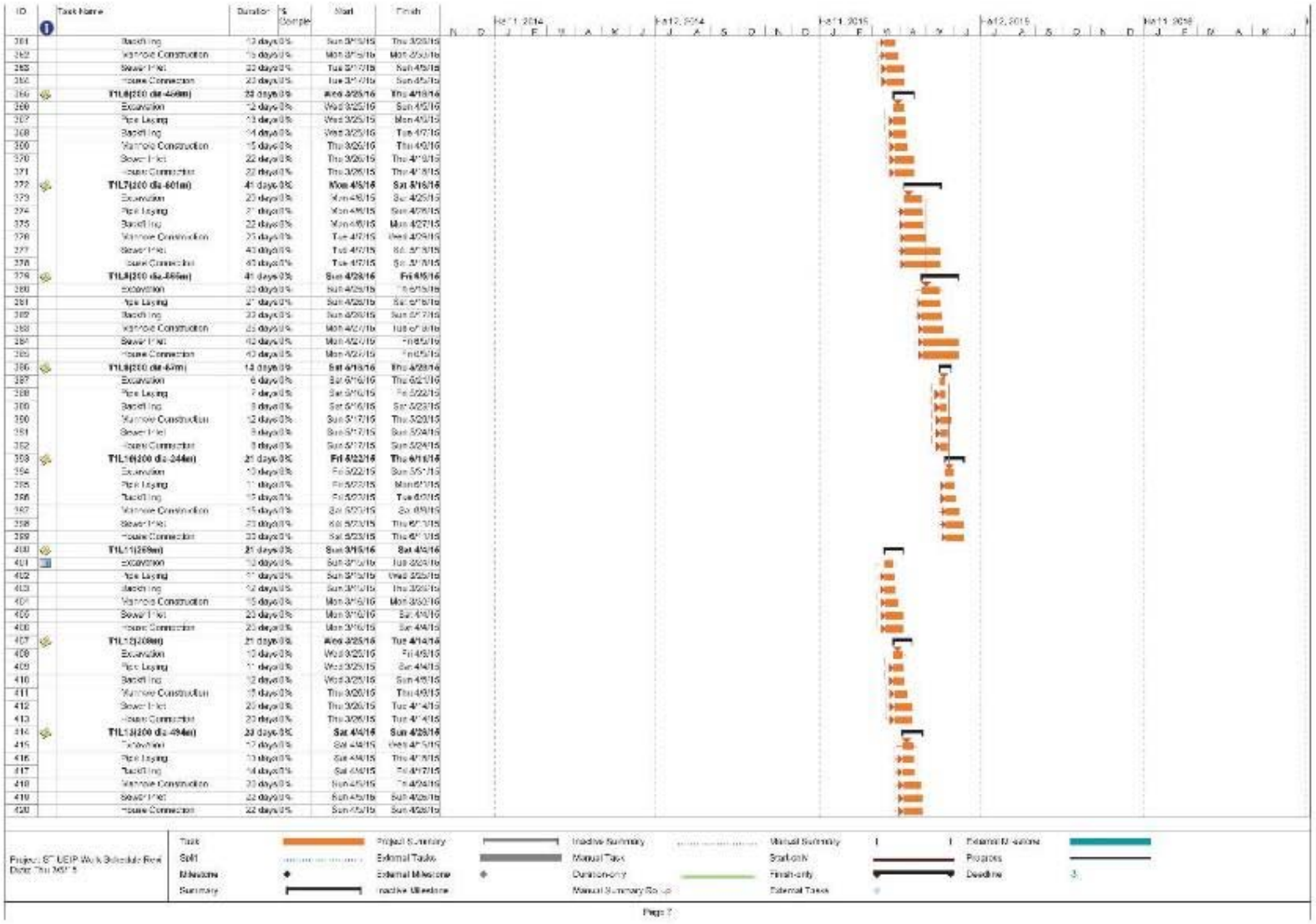
Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi



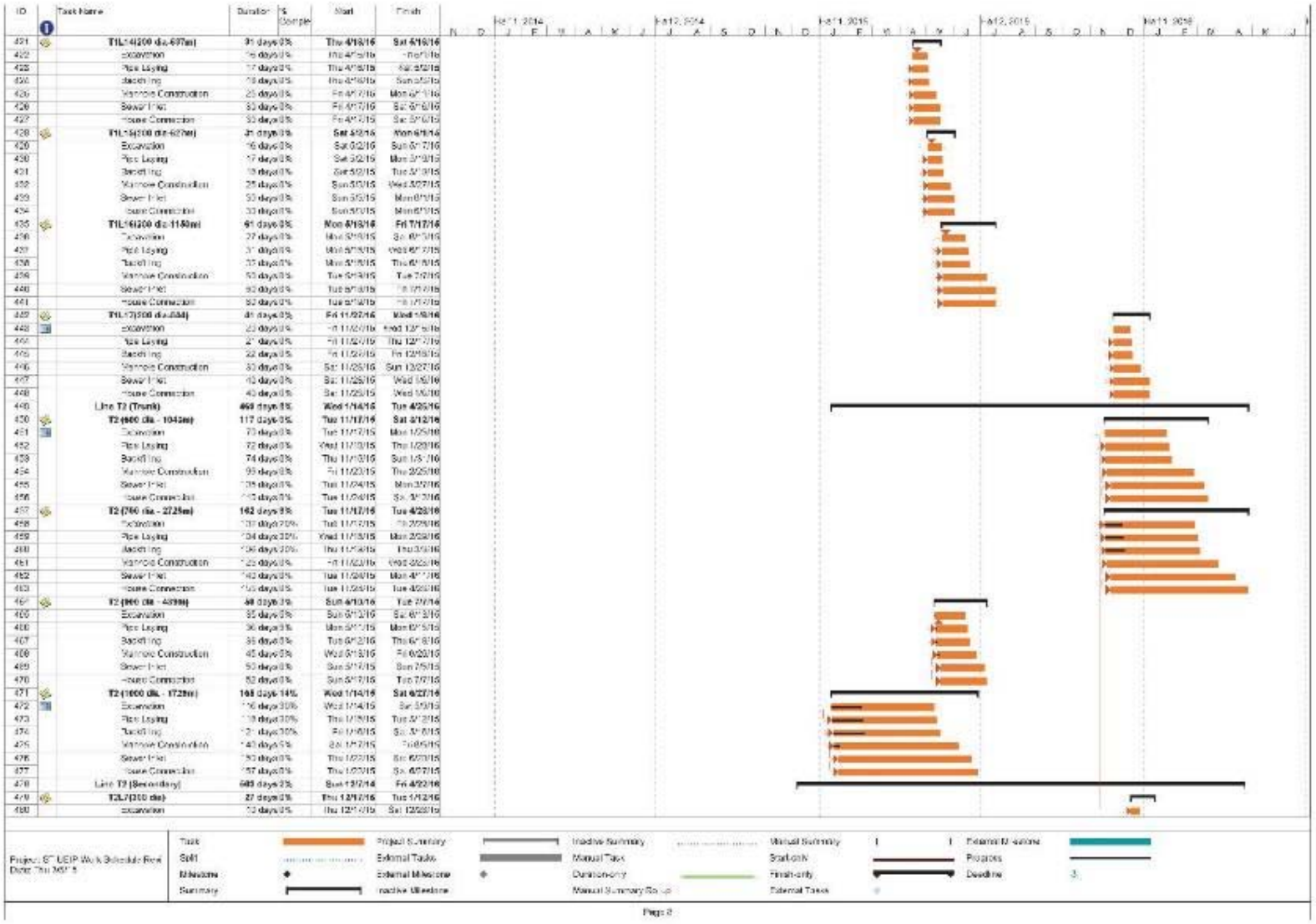




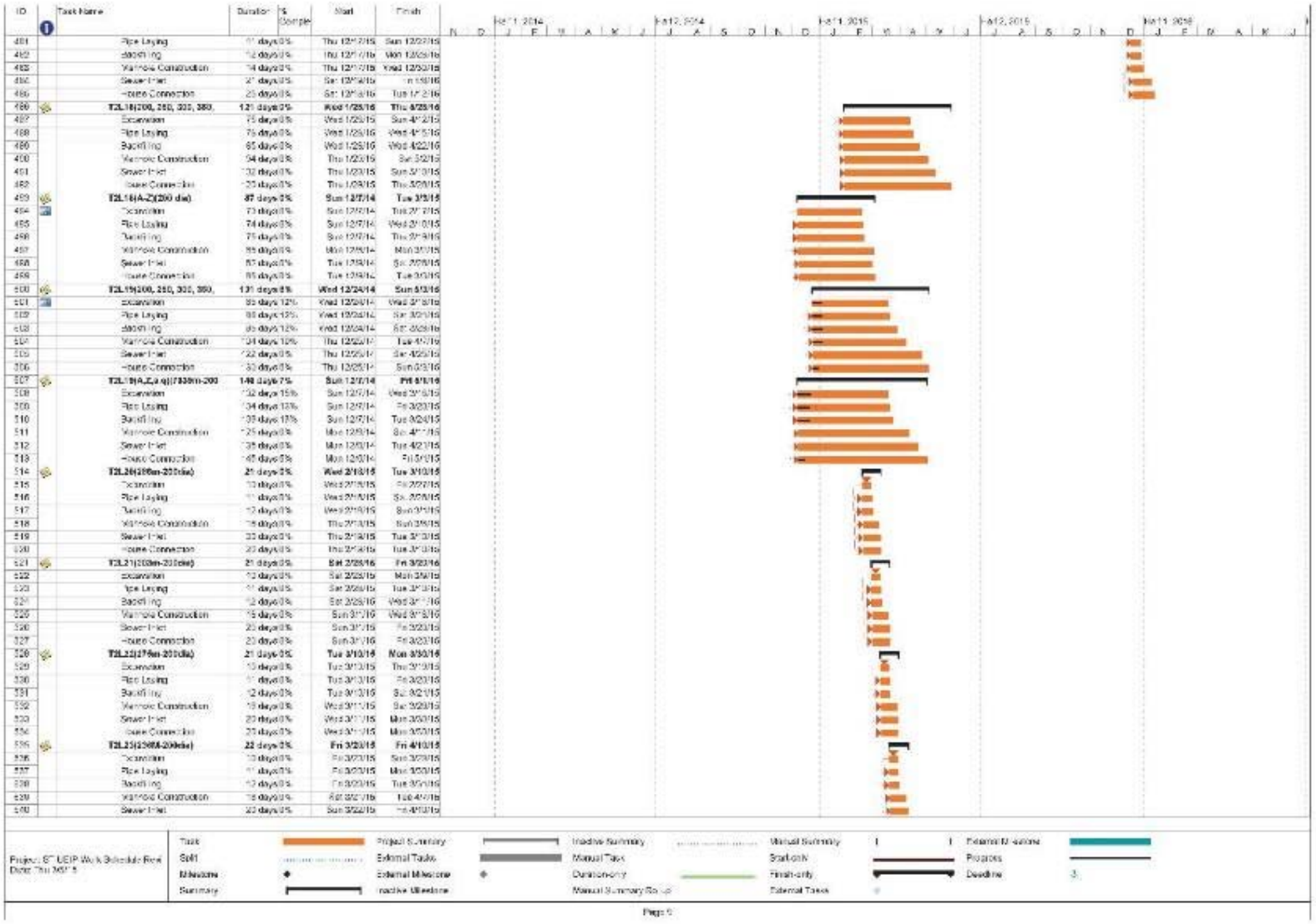
Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi

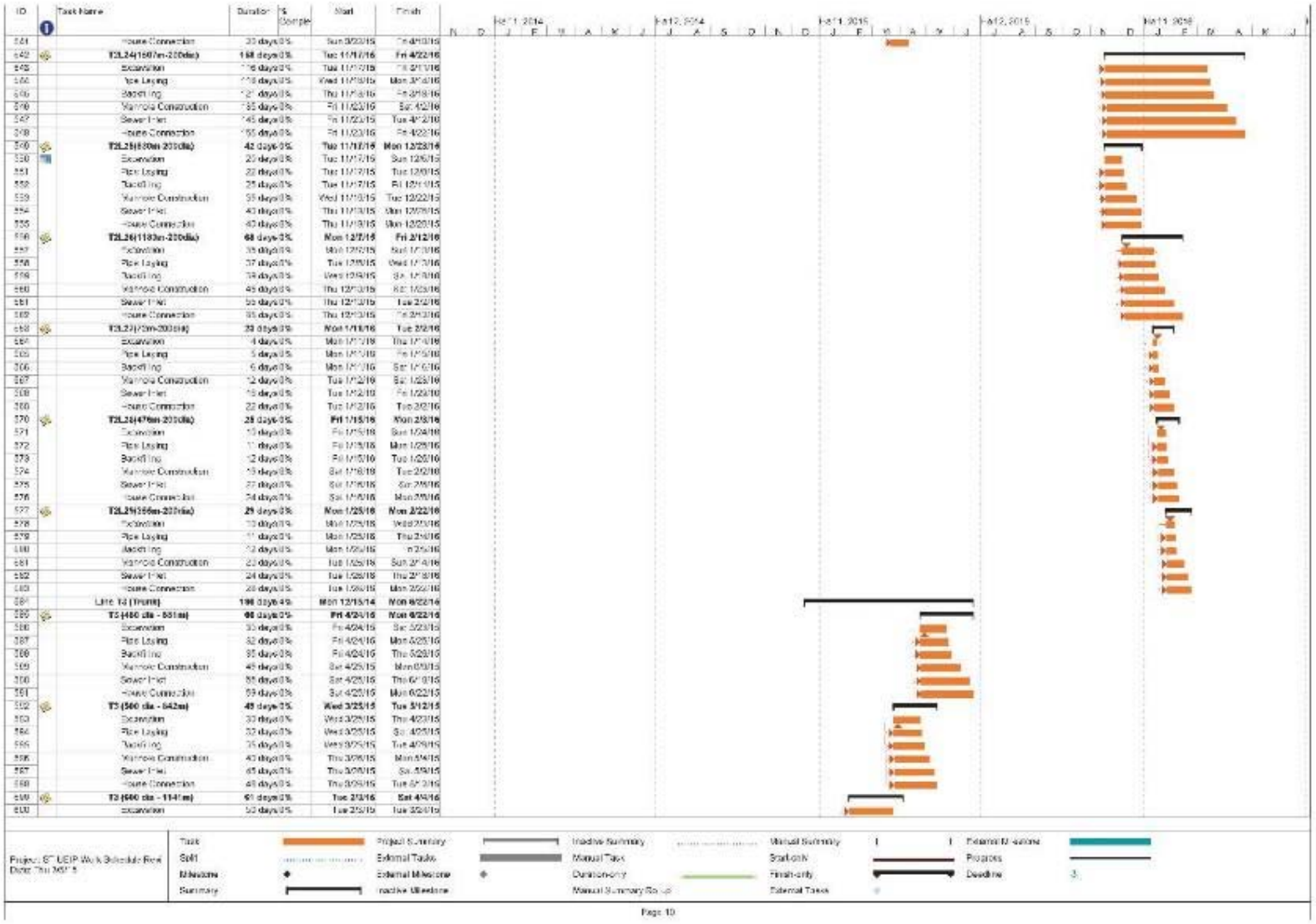


Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi

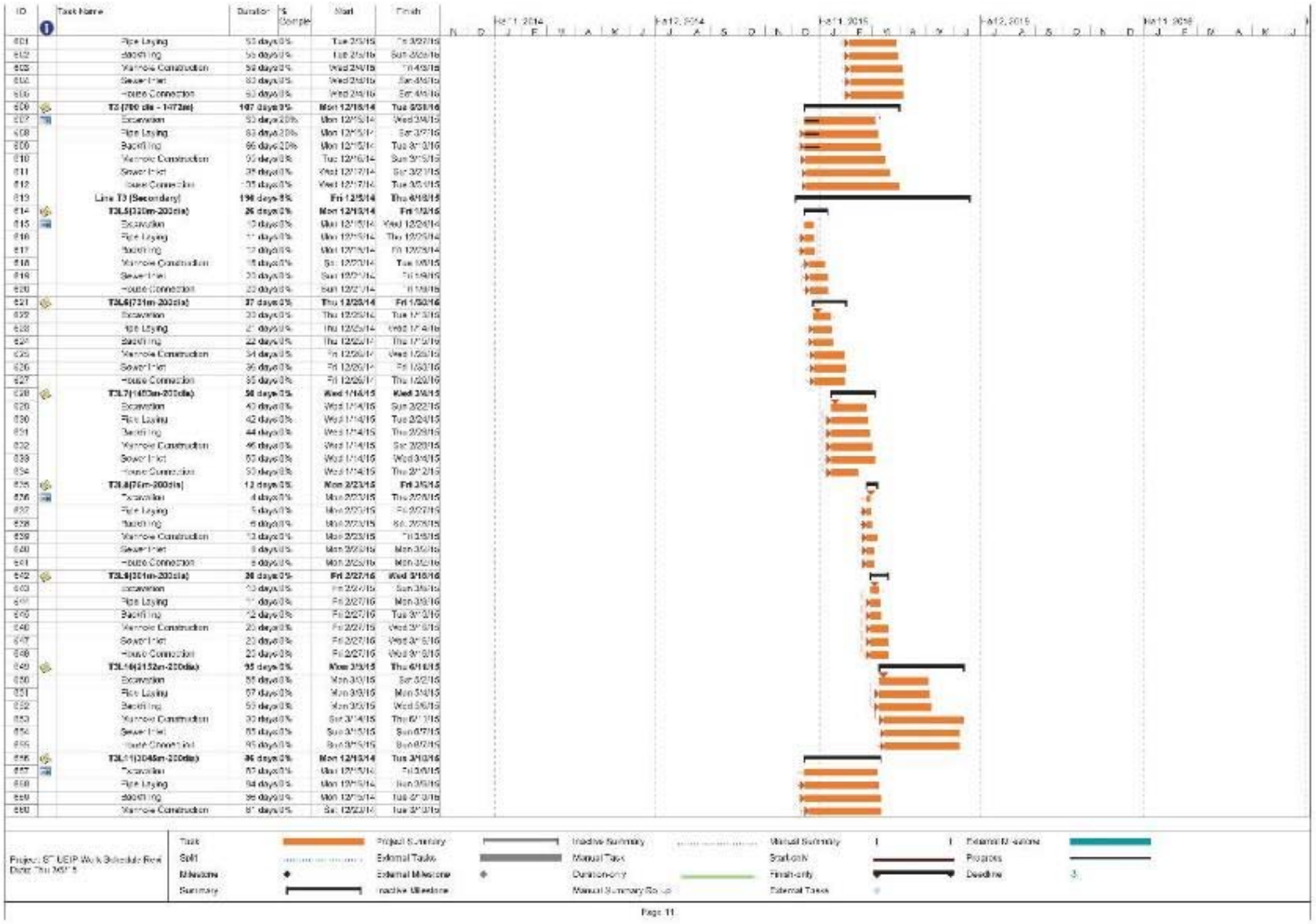


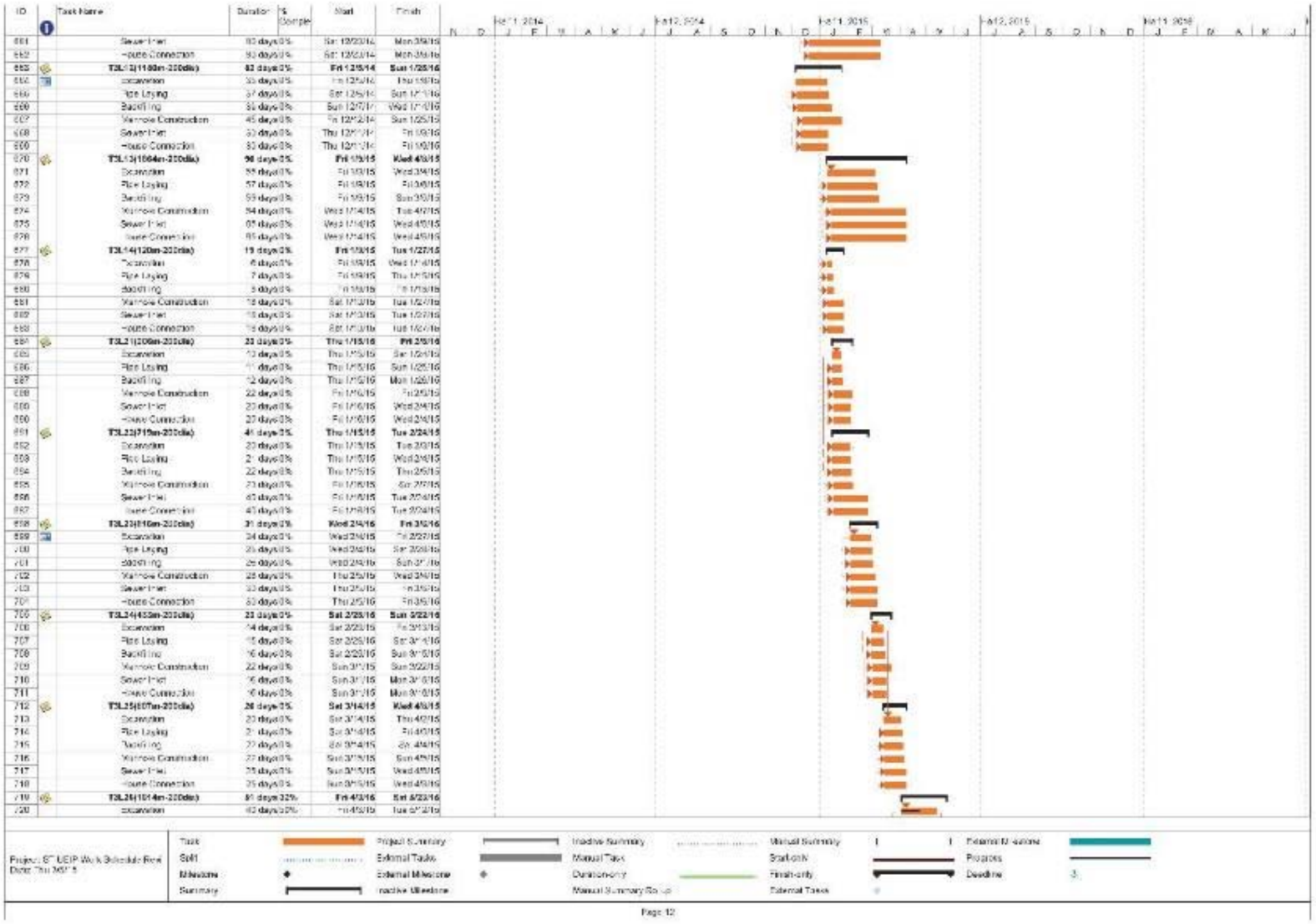
Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi

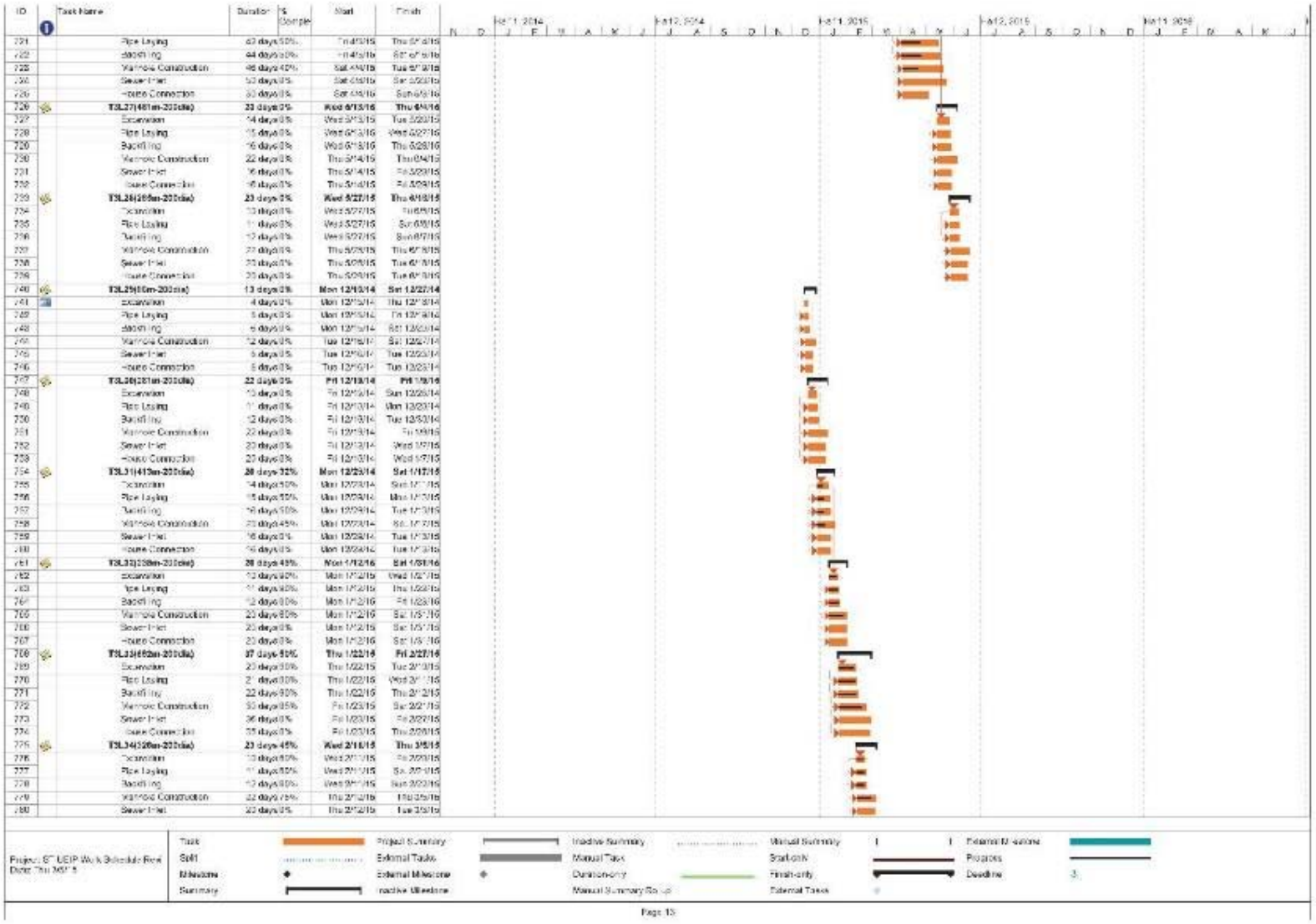


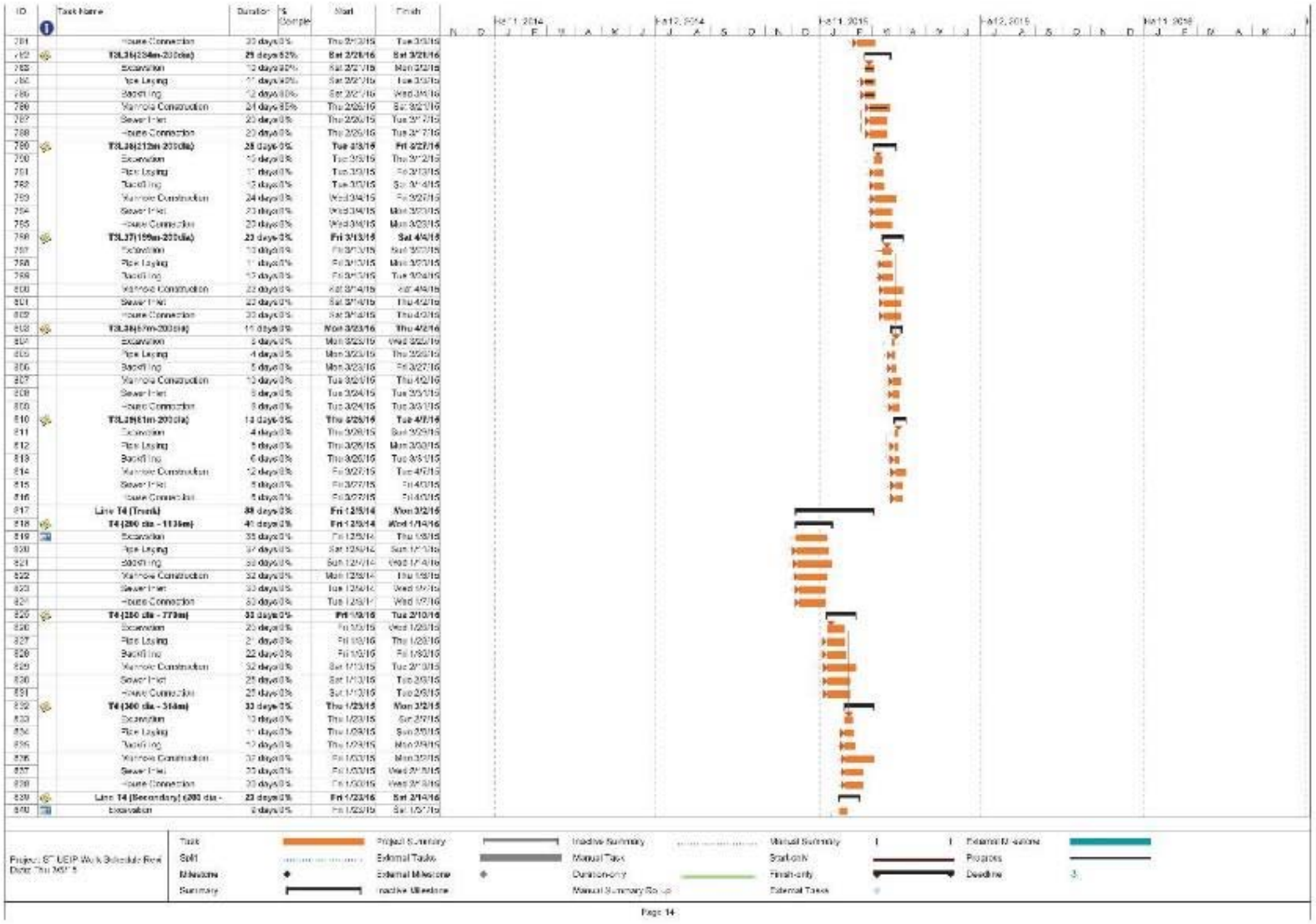


Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi

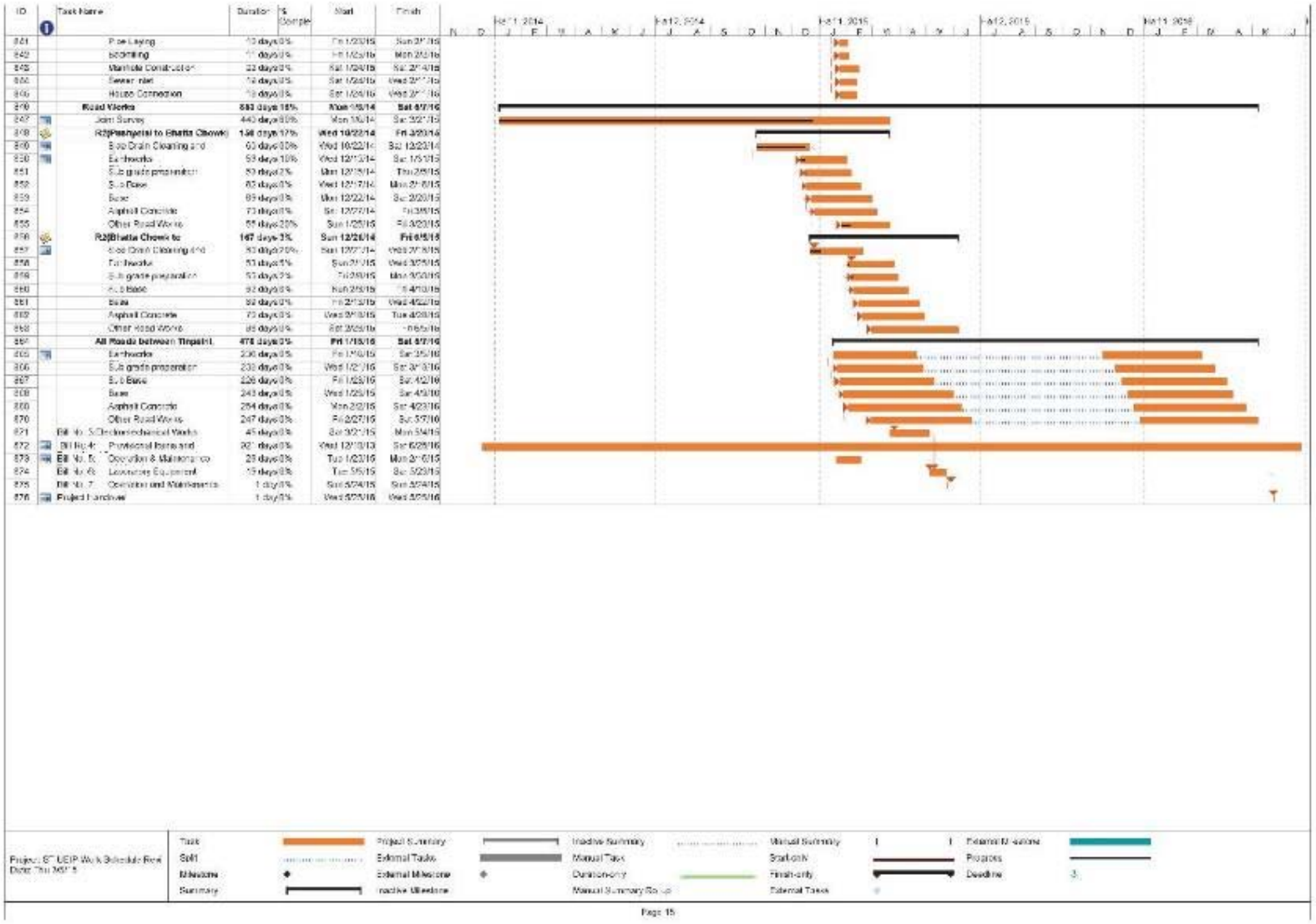








Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi



Photographs of the Month

1. Construction of Brick Drain at R2

2. Brick Manhole Construction at T3 Secondary Line

3. Office cum Lab Building WWTP, Jatuwa

4. Installation of 1600 dia Hume Pipe at S13

5. Gabion wall final layer completed at WWTP, Jatuwa

6.Rebar preparation for RCC manhole

7.Shoring of trenches at Secondary lines

8. Shoring before pipe laying at Line T3 Trunk

9. Installation of Precast Manhole

10. Construction of Stone Masonry Manhole at Line T2

11. Pipe Laying using Shoring at T2

12. Bar cutting and bending at Yard

13. Hume pipe stacked for laying at T3

14. Gabion works at Outlet S11

15. Manhole construction and Pipe laying at S13

16. RCC Drain construction visit at S13

17. Precast chamber units at Yard

18. Brick Drain Construction at CN2

19. Electric Pole Shifting at Road R2

20. Brick Drain Construction at Line B2

21. Brick Drain Construction at Line S13

22. Formworks for Slab at Line B1

23. Brick Drain Concreting at CN2

24. RCC Drain Construction at Line B2

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 February 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: **March, 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 Environment Improvement Project

Biratnagar Sub-Metropolitan city

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

DAILY WEATHER RECORD

Month: FEB Year: 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		Foggy						18.5	
2		Foggy						19.1	
3	Sunny							18.2	
4	Sunny							19.5	
5	Sunny							20.1	
6		Foggy						19.8	
7	Sunny							20.2	
8		Foggy						19.8	
9	Sunny							18.2	
10	Sunny							19.9	
11	Sunny							20.1	
12	Sunny							20.5	
13	Sunny							20.8	
14	Sunny							20.2	
15	Sunny							19.9	
16	Sunny							20.9	
17	Sunny							21.2	
18	Sunny							20.2	
19	Sunny							19.9	
20	Sunny							18.9	
21	Sunny					Night hours		20.1	10mm
22	Sunny							19.5	
23	Sunny							20.5	
24	Sunny							19.8	
25	Sunny							20.1	
26	Sunny							19.2	
27	Sunny							20.2	
28	Sunny							20.5	

SMEC-Brisbane-AQUA-IBDA-CENIAT
Approved by CSE
Record Checked by Junior Engineer
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Record Reported by Q.C Manager
Contractors Reps

Form: TSP 18

Secondary Towns Integrated Uraban Environment Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of FEBUARY 2015 **STIUEIP**

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test)

Ref. STIUEIP LAB/	Date of Testing	Location	Chanage	BRAND NAME I st class brick	Water Absorption	Compressive Strength N/mm2	SCALE OF Sample From
MR63	2/2/2015	R2 Road	1+150	HIMAL	,	12.08	4500 Nos-5 Nos
MR 64	2/2/2015	R2 Road	1+170	AMBEY		11.65	6000 Nos-5 Nos
MR65	2/2/2015	S13L1F	0+600to 0+620	AAKASH		13.84	4500 Nos-5 Nos
MR66	2/2/2015	S13L1F	0+600 to 0+620	AMBEY		11.98	4500 Nos-5 Nos
MR67	2/2/2015	S13L1F	0+600 to 0+620	PRANAM		12.66	6000 Nos -5Nos
MR 68	2/2/2015	S13L1F	0+600 to 0+620	PRANAM	7.30	13.0	3000 Nos -5Nos
MR69	2/2/2015	CN3	0+400	AAKASH		14.4	6000 Nos-5 Nos
MR 70	2/2/2015	L5L4 RANI	0+110	SHREE		12.69	6000 Nos-5 Nos
MR 71	3/2/2015	L5L4 RANI	0+140	SHREE	5.86	13.5	3000 Nos-5 Nos
MR 72	3/2/2015	L5L4 RANI	0+880	T&B		12.03	3000 Nos-5 Nos

Remarks:

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

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

Test chwcked by Junior Engineer

Consultantr Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractor Reps

Form TSP 18

Secondary Towns Integrated Uraban Environment Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of FEBUARY 2015

STIUEIP

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test)

Ref. STIUEIP LAB/	Date of Testing	Location	Chainage	BRAND NAME 1 st class brick	Water Absorption	Compressive Strength N/mm2	SCALE OF Sample From
MR73	3/2/2015	L5L4 RANI	0+140	AMBEY	,	13.95	3000 Nos-5 Nos
MR74	3/2/2015	L5L4 RANI	0+140	AMBEY		12.56	3000 Nos-5 Nos
MR 75	3/2/2015	L5L4 RANI			6.39		SAME
MR 76	3/2/2015	L5L4 RANI	0+140	SHREE		11.59	3000 Nos-5 Nos
MR 77	3/2/2015	L5L4 RANI	0+140	SHREE	5.23		SAME
MR 78	5/2/2015	R2 Road	2+350	SHREE		13.1	3000 Nos-5 Nos
MR 79	5/2/2015	R2 Road	3+300	HIMAL		13.3	3000 Nos-5 Nos
MR80	5/2/2015	CN3	0+350	T&B		12.73	3000 Nos-5 Nos
MR 81	7/2/2015	R2 Road	3+150	AMBEY		13.8	3000 Nos-5 Nos
MR 82	8/2/2015	L5L4 RANI	0+800	AANKIT		15.68	3000 Nos-5 Nos

Remarks:

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

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

Test chwcked by Junior Engineer

Consultantr Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractor Reps

Form TSP 18

Secondary Towns Integrated Uraban Environment Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of FEBUARY 2015 **STIUEIP**

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test)

Ref. STIUEIP LAB/	Date of Testing	Location	Chainage	BRAND NAME 1 st class brick	Water Absorption	Compressive Strength N/mm2	SCALE OF Sample From
MR 83	8/2/2015	S13L1F	0+580	T&B	,	14.35	3000 Nos-5 Nos
MR84	8/2/2015	S13L1F	0+600	ANAND		14.97	3000 Nos-4 Nos
MR 85	8/2/2015	R2 Road	1+160	AMBEY		16.37	4500 Nos -5 Nos
MR 86	8/2/2015	R2 Road	3+370	AMBEY		12.75	6000 Nos-5 Nos
MR 87	11/2/2015	R2 Road	3+450	SHREE		13.48	3000 Nos-5 Nos
MR 88	11/2/2015	R2 Road	3+460	SHREE		12.6	3000 Nos-5 Nos
MR 89	13/2/2015	R2 Road	3+450	AMBEY		12.2	3000 Nos-5 Nos
MR 90	13/2/2015	R2 Road	3+450	AMBEY		14.09	3000 Nos-5 Nos
MR 91	14/2/2015	R2 Road	3+400	AMBEY		13.0	3000 Nos-5 Nos
MR 92	14/2/2015	S13 L1F	0+200 to 0+205	T&B	1.19	16.25	3000 Nos-5 Nos

Remarks:

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

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

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Secondary Towns Integrated Uraban Environment Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of FEBUARY 2015 **STIUEIP**

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test)

Ref. STIUEIP LAB/	Date of Testing	Location	Chainage	BRAND NAME 1 st class brick	Water Absorption	Compressive Strength N/mm2	SCALE OF Sample From
MR 93	15/2/2015	R2 Road	2+150	SHREE		16.68	4500 Nos-5 Nos
MR 94	15/2/2015	R2 Road	3+450	T&B		12.06	4500 Nos-5 Nos
MR95	16/2/2015	CN2	CN2 L2 Sourth side	AMBEY		13.04	4500 Nos-5 Nos
MR96	16/2/2015	CN2	CN2 L2 Sourth side	AMBEY		14.77	4500 Nos-5 Nos
MR 97	17/2/2015	R2 Road	1+250	AMBEY		13.54	4500 Nos-5 Nos
MR98	17/2/2015	R2 Road	1+250	T&B		12.48	4500 Nos-3 Nos
MR99	17/2/2015	R2 Road	2+790	AMBEY		13.48	4500 Nos-3 Nos
MR100	17/2/2015	R2 Road	3+500	SHREE		11.36	4500 Nos-3 Nos
MR 101	19/2/2015	Rani western south side	0+465,0+535	SHREE		14.43	4500 Nos-3 Nos
MR 102	19/2/2015	Rani western south side	0+465,0+535	HIMAL		14.12	4500 Nos-5 Nos

Remarks:

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

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

Test chwcked by Junior Engineer

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CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractor Reps

Form TSP 18

Secondary Towns Integrated Uraban Environment Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of FEBUARY 2015

STIUEIP

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test)

Ref. STIUEIP LAB/	Date of Testing	Location	Chanage	BRAND NAME I st class brick	Water Absorption	Compressive Strength N/mm2	SCALE OF Sample From
MR 103	20/2/2015	R2 Road	3+600	SHREE		13.91	4500 Nos-5 Nos
MR104	20/22015	R2 Road	3+600	AMBEY		13.86	4500 Nos-5 Nos
MR105	22/2/2015	R2 Road	1+240	T&B		11.87	4500 Nos-5 Nos
MR 106	22/2/2015	R2 Road	1+240	T&B		13.54	4500 Nos-5 Nos
MR 107	22/2/2015	R2 Road	1+240	T&B		12.37	4500 Nos-5 Nos
MR 108	22/2/2015	R2 Road	3+600	T&B		11.04	4500 Nos-5 Nos
MR 109	22/2/2015	R2 Road	3+600	AMBEY		14.00	4500 Nos-5 Nos
MR 110	24/2/2015	R2 Road	3+600	T&B		13.39	4500 Nos-5 Nos
MR 111	24/2/2015	R2 Road	1+850	T&B		15.81	4500 Nos-5 Nos
MR 112	24/2/2015	R2 Road	2+100	HIMAL		11.32	4500 Nos-5 Nos

Remarks:

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

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

Test chwcked by Junior Engineer

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CTCE-KALIKA J/V

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Contractor Reps

Form TSP 18

Secondary Towns Integrated Uraban Environment Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of FEBUARY 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
MR 113	24/2/2015	S13L1F	0+200	T&B		11.65	3000 Nos-5 Nos
MR114	26/2/2015	R2 Road	3+680	SHREE		14.35	3000 Nos-5 Nos
MR 115	26/2/2015	R2 Road	3+700	SHREE		12.49	3000 Nos-5 Nos
MR 116	26/2/2015	R2 Road	3+650	AMBEY		10.52	1500 Nos-5 Nos
MR 117	26/2/2015	R2 Road	3+660	AMBEY		12.23	1500 Nos-5 Nos
MR 118	26/2/2015	R2 Road	4+00	AMBEY		10.50	1500 Nos-5 Nos
MR119	27/2/2015	R2 Road	4+00	AMBEY	7.6	10.91	1500 Nos-5 Nos
MR120	27/2/2015	R2 Road	3+080	SHREE	7.54	11.57	1500 Nos-5 Nos

Remarks:

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

SMEC-Brisbane-AQUA-BDA-CEMAT	CTCE-KALIKA J/V
Approved by Construction Supervision Engineer Test chwcked by Junior Engineer *Consultantr Reps*	Submitted by Project Manager Test conducted by Q.C Manager Contractor Reps

SECONDARY TOWN INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar-Sub-Metropolitant City

SUMMERY OF THE ~~MOTAR~~ MORTAR WORK MIX CUBE FOR THE MONTH OF FEBUARY 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	98	Shivam	0+500 B2L2 DPS	1:4 by volume	18/01/2015	28.50	260	330	15/02/2015	6.70	15/02/2015	7.36	
2	99	Shivam	0+500 B2 Trimurti chowck	1:4 by volume	18/01/2015	28.50	260	330	25/01/2015	8.20	15/02/2015	10.00	
3	100	Shivam	0+500 B2 Trimurti chowck	1:4 by volume	18/01/2015	28.50	260	330	25/01/2015	8.16	15/02/2015	10.00	
4	101	Shivam	T3L35t,T3L34/T3L33 Seware line	1:4 by volume	18/01/2015	28.50	260	330	25/01/2015	6.12	15/02/2015	7.55	
5	102	Shivam	S13L2A 0+600	1:4 by volume	19/01/2015	28.50	270	330	26/01/2015	~~6.60~~ 8.57	15/2/2015	9.80	
6	103	Shivam	0+427 B2L2(DPS)	1:4 by volume	20/01/2015	28.50	270	330	27/01/2015	9.80	17/2/2015	9..69	
7	104	Koshi	R2 Road 2+100	1:4 by volume	26/01/2015	33.00	255	325	26/01/2015	6.53	23/2/2015	10.00	
8	105	Koshi	B2L2 0+530 Trimurti chowck	1:4 by volume	27/01/2015	33.00	255	325	3/2/2015	6.90	24/2/2015	7.76	
9	106	Koshi	R2 Road 2+300 RHS	1:4 by volume	27/01/2015	33.00	255	325	3/2/2015	8.00	24/2/2015	9.80	
10	107	Koshi	R2 Road LHS 2+300	1:4 by volume	28/01/2015	33.00	255	325	4/2/2015	5.71	25/2/2015	6.53	
11	108	Koshi	R2 Road 2+250	1:4 by volume	28/01/2015	33.00	255	325	4/2/2015	3.50	25/2/2015	9.59	
12	109	Koshi	R2 Road 2+550	1:4 by volume	29/01/2015	33.00	255	325	5/2/2015	6.30	26/2/2015	8.98	
13	110	Koshi	CN3 0.565	1:4 by volume	30/01/2015	33.00	255	325	6/1/2015	N/C	27/02/2015	8.78	
14	111	Koshi	R2 Road 2+450	1:4 by volume	31/01/2015	33.00	255	325	7/2/2015	6.60	28/2/2015	10.00	
15	112	Koshi	CN3 0+450	1:4 by volume	31/01/2015	33.00	255	325	7/2/2015	6.33	28/2/2015	11.22	
16	113	Koshi	R2 Road 2+400 to 2+250	1:4 by volume	1/2/2015	33.00	255	325	8/2/2015	6.94	1/3/2015		
17	114	Koshi	R2 Road 2+300	1:4 by volume	2/2/2015	33.00	255	325	9/2/2015	N/C	2/3/2015		
18	115	Koshi	R2 Road 2+350	1:4 by volume	3/2/2015	33.00	255	325	10/2/2015	~~N/C~~ 2.04	3/3/2015		
19	116	Koshi	CN3 0+950	1:4 by volume	5/2/2015	33.00	255	325	12/2/2015	10.41	5/3/2015		
20	117	Koshi	R2 Road 1+450	1:4 by volume	5/2/2015	33.00	255	325	12/2/2015	9.80	5/3/2015		
										Total cube crushed	80		

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 Quality controll Manager

Contractore Reps

SECONDARY TOWN INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar-Sub-Metropolitant City

SUMMERY OF THE ~~MOTAR~~ MORTAR WORK MIX CUBE FOR THE MONTH OF FEBUARY 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	
21	118	Koshi	CN3 0+950	1:4 by volume	5/2/2015	33.00	255	325	12/2/2015	NC 2.04	5/3/2015		
22	119	Koshi	CN3 I2 0+360	1:4 by volume	6/2/2015	33.00	255	325	13/2/2015	NC 3.30	6/3/2015		
23	120	Koshi	CN3L2 0+380	1:4 by volume	9/2/2015	33.00	255	325	16/2/2015	5.90	9/3/2015		
24	121	Koshi	S13L1F 0+810	1:4 by volume	9/2/2015	33.00	255	325	16/2/2015	8.60	9/3/2015		
25	122	Koshi	R2 Road 3+400	1:4 by volume	12/2/2015	33.00	255	325	19/2/2015	5.50	12/3/2015		
26	123	Koshi	RANI 0+480 Western sourth side	1:4 by volume	17/2/2015	33.00	255	325	24/2/2015	8.20	12/3/2015		
27	124	Koshi	RANI 0+490 Western Sourth side	1:4 by volume	18/2/2015	33.00	255	325	25/2/2015	7.80	18/3/2015		
28	125	Koshi	R2 Road 3+550	1:4 by volume	18/2/2015	33.00	255	325	25/2/2015	7.80	18/3/2015		
29	126	Koshi	RANI 0+500 Western sourth side	1:4 by volume	19/2/2015	33.00	255	325	26/2/2015	7.80	19/3/2015		
30	127	Koshi	R2 Road 3+550	1:4 by volume	20/2/2015	33.00	255	325	27/2/2015	8.80	20/3/2015		
31	128	Koshi	RANI 0+530 Western side	1:4 by volume	20/2/2015	33.00	255	325	27/2/2015	7.10	20/3/2015		
										Total cube crushed 22			Till 102

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

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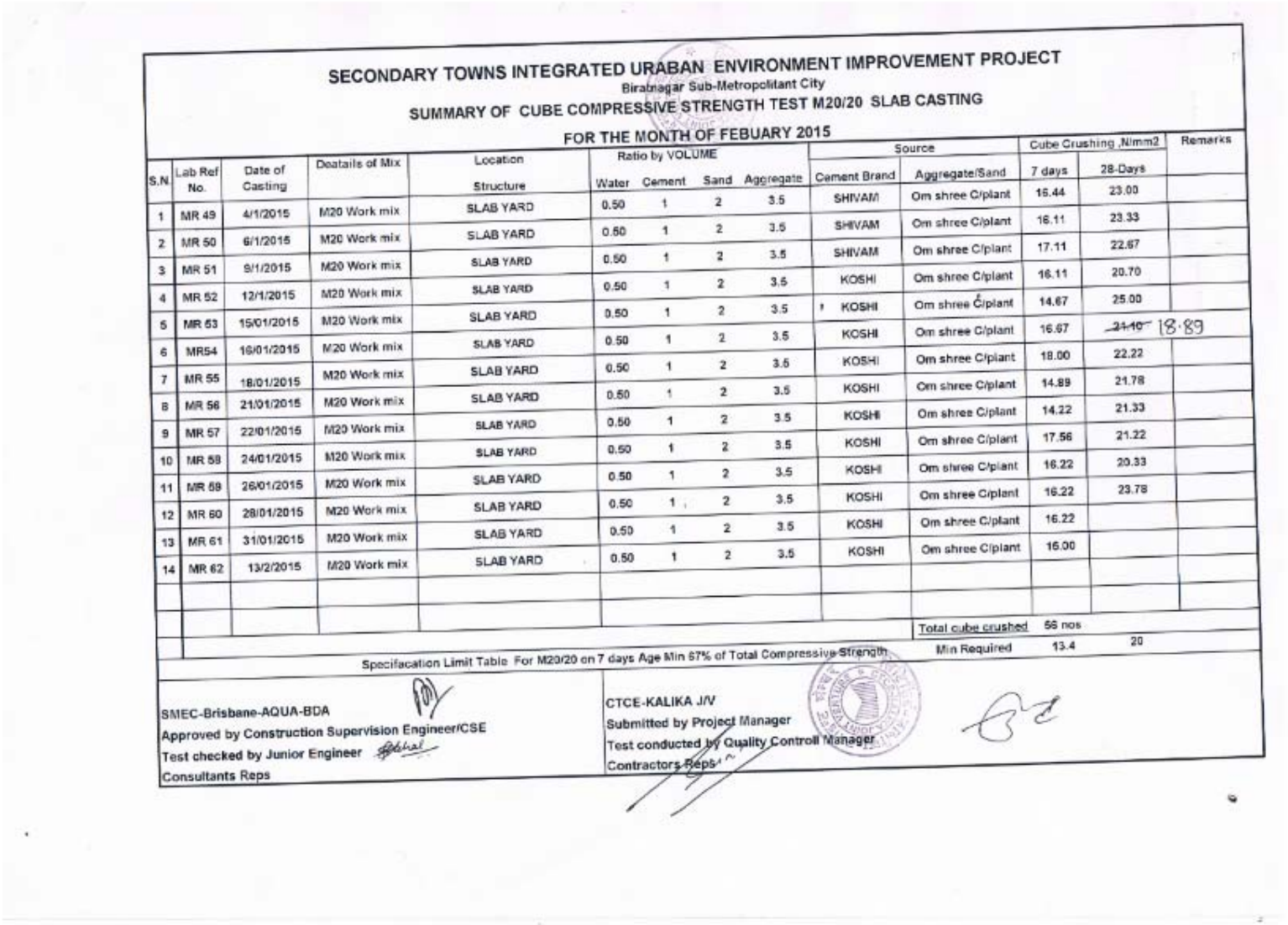

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING

FOR THE MONTH OF FEBUARY 2015

S.N	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by VOLUME Water	Cement	Sand	Aggregate	Source: Cement Brand	Source: Aggregate/Sand	Cube Crushing ,N/mm2: 7 days	28-Days	Remarks
1	MR 49	4/1/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.44	23.00	
2	MR 50	6/1/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.11	23.33	
3	MR 51	9/1/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.11	22.67	
4	MR 52	12/1/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	16.11	20.70	
5	MR 53	15/01/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	14.67	25.00	
6	MR54	16/01/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	16.67	~~21.10~~ 18.89	
7	MR 55	18/01/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	18.00	22.22	
8	MR 56	21/01/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	14.89	21.78	
9	MR 57	22/01/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	14.22	21.33	
10	MR 58	24/01/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	17.56	21.22	
11	MR 59	26/01/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	16.22	20.33	
12	MR 60	28/01/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	16.22	23.78	
13	MR 61	31/01/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	16.22		
14	MR 62	13/2/2015	M20 Work mix	SLAB YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	16.00		
										Total cube crushed	56 nos		
				Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength						Min Required	13.4	20	

SMEC-Brisbane-AQUA-BDA
Approved by Construction Supervision Engineer/CSE
Test checked by Junior Engineer
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Quality Controll Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

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

FOR THE MONTH OF FEBUARY 2015

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by VOLUME Water	Cement	Sand	Aggregate	Source Cement Brand	Aggregate/Sand	Cube Crushing ,N/mm2 7 days	28-Days	Remarks
1	154	4/1/2015	M20 Work mix	B3L3 0+310 to 0+322 Shre wall pannel	0.50	1	2	3.5	Shivam	Om shree C/plant	16.18	26.67	
2	155	4/1/2015	M20 Work mix	B3L2 0+244 Share wall pannel	0.50	1	2	3.5	Shivam	Om shree C/plant	15.00	25.00	
3	156	5/1/2015	M20 Work mix	B3L3 0+253 Share wall pannel 12	0.50	1	2	3.5	Shivam	Om shree C/plant	15.11	20.00	
4	157	5/1/2015	M20 Work mix	Share wall pannel no 11 0+337	0.50	1	2	3.5	Shivam	Om shree C/plant	18.33	26.67	
5	158	5/1/2015	M25 Work mix	B1L1 RCC bed 2+300to 2+100	0.46	1	1.68	3.15	Shivam	Om shree C/plant	21.11	28.89	
6	159	6/1/2015	M20 Work mix	B3L3 0+300to 0+312	0.50	1	2	3.5	Shivam	Om shree C/plant	16.22	23.56	
7	160	6/1/2015	M20 Work mix	B3L3 0+712	0.50	1	2	3.5	Shivam	Om shree C/plant	16.67	22.67	
8	161	7/1/2015	M20 Work mix	B3L3 0+280to 0+292 share wall no 14	0.50	1	2	3.5	Shivam	Om shree C/plant	17.11	20.44	
9	162	7/1/2015	M20 Work mix	B2L2 DPS share wall	0.50	1	2	3.5	Shivam	Om shree C/plant	15.33	20.22	
10	163	11/1/2015	M20 Work mix	B2L2 DPS share wall	0.50	1	2	3.5	Shivam	Om shree C/plant	17.89	21.11	
11	164	19/1/2015	M20 Work mix	R2 Road 1+950to 2+00 pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	20.00	22.11	
12	165	27/01/2015	M20 Work mix	CN3 0+450 to 0+480 pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	20.67	27.78	
13	166	28/1/2015	M20 Work mix	CN30+950 to 0+970 pcc bed	0.50	1	2	3.5	Shivam	Om shree C/plant	15.33	29.44	
14	167	28/1/2015	M20 Work mix	B3L1 1+390 Share wall	0.50	1	2	3.5	Shivam	Om shree C/plant	[illegible]	24.56	
15	168	28/1/2015	M20 Work mix	S13L1 share wall pannel no 12	0.50	1	2	3.5	Shivam	Om shree C/plant	17.78	30.56	
16	169	28/1/2015	M20 Work mix	B2L2 DPS LINE share wall	0.50	1	2	3.5	Shivam	Om shree C/plant	16.22	23.33	
										Total cube crushed	64.00	64.00	128.00
				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
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Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Quality Controll Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

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

FOR THE MONTH OF FEBUARY 2015

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location / Structure	Ratio by VOLUME				Source		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
17	170	29/1/2015	M20 Work mix	B3L1 Share wall 1+400.5	0.50	1	2	3.5	Shivam	Om shree C/plant	12.78	21.78	
18	171	1/2/2015	M15 Work mix	B3L1 Leanear concrete pcc bed 1+145 to 1+180	0.52	1	2.33	4.17	Koshi	Om shree C/plant	7.33		
19	172	2/2/2015	M15 Work mix	B3L1 Leanear concrete pcc bed 1+180 to 1+180	0.52	1	2.33	4.17	Koshi	Om shree C/plant	5.56		
20	173	3/2/2015	M15 Work mix	B3L1 Leanear concrete pcc bed 1+185 to 1+195	0.52	1	2.33	4.17	Koshi	Om shree C/plant	6.11		
21	174	3/2/2015	M20 Work mix	B3L1 share wall 1+441	0.50	1	2	3.5	Koshi	Om shree C/plant	13.89		
22	175	5/2/2015	M20 Work mix	B3L1 1+431 share wall	0.50	1	2	3.5	Koshi	Om shree C/plant	13.11		
23	176	6/2/2015	M20 Work mix	B3L2 1+438	0.50	1	2	3.5	Koshi	Om shree C/plant	16.67		
24	177	9/2/2015	M20 Work mix	B3L1 1+140 Share wall	0.50	1	2	3.5	Koshi	Om shree C/plant	16.89		
25	178	10/2/2015	M25 Work mix	B1L2 Rcc Bed	0.46	1	1.68	3.15	Koshi	Om shree C/plant	20.00		
26	179	14/2/2015	M15 Work mix	B1L1 PCC Bed	0.52	1	2.33	4.17	Koshi	Om shree C/plant	8.89		
27	180	14/2/2015	M25 Work mix	B3L1 House crossing RCC	0.46	1	1.68	3.15	Koshi	Om shree C/plant	17.22		
28	181	14/2/2015	M25 Work mix	R2 Road Road crossing Top slab 1+700,1+500,1+850 LHS/RHS	0.46	1	1.68	3.15	Koshi	Om shree C/plant	20.33		
29	182	15/2/2015	M15 Work mix	R2 Road footh path 2+150 to 2+180	0.52	1	2.33	4.17	Koshi	Om shree C/plant	12.78		
30	183	17/2/2015	M25 Work mix	B3L1 House crossing Top slab 1+160,1+180,0+100	0.46	1	1.68	3.15	Koshi	Om shree C/plant	26.56		Near Cement Godam
31	184	18/2/2015	M20 Work mix	S9 Share wall	0.50	1	2	3.5	Koshi	Om shree C/plant	12.89		
32	185	19/2/2015	M20 Work mix	RANI 0+500 PCC Bed	0.50	1	2	3.5	Koshi	Om shree C/plant	16.67		
33	186	19/2/2015	M20 Work mix	S13L1F 0+210 to 0+250 pcc bed	0.50	1	2	3.5	Koshi	Om shree C/plant	15.67		
Note:28 days cube test awaiting to be										Total cube crushed	70.00	65 Remains	
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 Quality Controll Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summary of (Fine Aggregate concrete Sand)

FOR THE MONTH OF FEBUARY 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	From R2 Road	MR10	100	99.5	92.03	70.43	51.66	18.6	4.49			1416kg/m3	source
2	From R2 Road	MR11	100	99.27	90.64	70.28	49.72	18.17	4.59				om shree
													crusher
													plant
			100-100	90-100	75-100	55-90	35-59		0-10				
	SPECIFICATION LIMIT	IS 383-1970(Zone-2)											

SMEC-BRISBANE-AQUA-CEMAT-BDA
Construction Supervision Enginer/CSE
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 ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 KERB STONE

FOR THE MONTH OF FEBUARY 2015

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by VOLUME				Source		Cube Crushing ,N/mm2		Remarks
				Structure	Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	8K	7/2/2015	M20 Work mix	KERB STONE YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.00	0.00	
2	9K	20/2/2015	M20 Work mix	KERB STONE YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.00	0.00	
3	10K	21/2/2015	M20 Work mix	KERB STONE YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.90	0.00	
4	11K	22/2/2015	M20 Work mix	KERB STONE YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	0.00	0.00	
5	12K	24/02/2015	M20 Work mix	KERB STONE YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	0.00	0.00	
6	13K	27/2/2015	M20 Work mix	KERB STONE YARD	0.50	1	2	3.5	KOSHI	Om shree C/plant	0.00	0.00	
										Total cube crushed	12 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 Quality Controll Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summery of(Coarse Concrete Crushed Aggregate 20mm down)

FOR THE MONTH OF FEBUARY 2015

S.N.	DESCRIPTION / SOURCE	TYPE OF MAT.	LAB REF. NO.	Grain Siza Distribution 25	20	10	4.75	FI %	LAA %	ACV	SSS	Unit Wt %	Sp. Gr.	Water Absorption %	REMARKS
1	From Contractor yard stock pile	Cr Aggregates	MR 11	100	98.58	31.48	11.83								Aggregates
2	From Contractor yard stock pile	Cr Aggregates	MR12	100	97.03	34.55	11.12								Source
															Om shree
															Crusher
															Plant
	REQUIREMENT LIMITS	AVG		100.0	97.8	33.0	11.5								Absorved 1.5%
	Section 900:IS 383-1970	Gradednominal size 20mm		100	95-100	25-55	0-10	Less 25%	Less 35%	Less 30%					Finer

NOTE :Sample collected from R2 Road For PCC Bed concrete 20mm 55% & 10mm 35 % mixed

SMEC -BRISBANE-AQUA-CEMAT-BDA

Approved by C.S.E

Consultant Reps

Test Checked by Junior Engineer

CTCE-KALIKA J/V

Quality controll Manager

Project Manager

Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

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

FOR THE MONTH OF FEBUARY 2015

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by VOLUME				Source		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	MR 01	1/2/2015	M30 Work mix	SLAB YARD	0.40	1	1.5	2.4	SHIVAM	Om shree C/plant	21.10	0.00	
2	MR 02	3/2/2015	M30 Work mix	SLAB YARD	0.40	1	1.5	2.4	SHIVAM	Om shree C/plant	20.70	0.00	
3	MR 03	4/2/2015	M30 Work mix	SLAB YARD	0.40	1	1.5	2.4	SHIVAM	Om shree C/plant	20.90	0.00	
4	MR 04	22/2/2015	M30 Work mix	SLAB YARD	0.40	1	1.5	2.4	KOSHI	Om shree C/plant	0.00	0.00	
5	MR 05	23/02/2015	M30 Work mix	SLAB YARD	0.40	1	1.5	2.4	KOSHI	Om shree C/plant	0.00	0.00	
6	MR 06	27/02/2015	M30 Work mix	SLAB YARD	0.40	1	1.5	2.4	KOSHI	Om shree C/plant	0.00	0.00	
										Total cube crushed	16. 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 Quality Controll Manager
Contractors Reps

SECONDARY TOWN INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

Monthly Laboratory Testing Report

(For The Month OF FEBUARY 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	1	1	1			2	
		MDD & OMC							
		C.B.R							
		Field Density							
2	SUB GRADE Preparation	MDD & OMC	1					1	
	as Pere Specification	Field density							
		C.B.R	1					1	
3	BRICK WORK	Water Absorption	140	36	36	0		176	
	Required Test	Compressive Strength	340	290	286	4		630	
4	Masonry Mortar (CM 7.05)	Compressive strength	388	132	126	5		520	
5	CONCRETE AGGREGATE								
	Coarse aggregate (20 mm)	Sieve analysis (20 mm)	10	2				12	
		LAA	6					6	
		Specific Gravity	2					2	
		FI / EI	6					6	
		ACV	6					6	
		SSS							
		Unit weight	2					2	
	Fine aggregate (Sand)	Sieve analysis	9	2				11	
		Sand Equivalent Test(S.E)							
		Unit weight	2					2	
6	CONCRETE MIX DESIGN								
	Concrete M15/20,M20/25	Compressive strength	66	0				66	
	M25/20,&M30/20	Slump test	72					72	
7	CEMENT Required Test								
	OPC Cement	Setting time	11					11	
		Normal Consistency	11					11	
		Compressive strength	38					38	
8	CONCRETE								
	Work Mix of site Test	Compressive strength	824	240	233	7		1064	
9	REINFORCEMENT	Required Test							8,10,12,16
	Reinforcement fore steel	As per Specification	1	1				2	20,28 mm d/a
10	PAVEMENT MATERIALS								

SECONDARY TOWN INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

Monthly Laboratory Testing Report

(For The Month OF FEBUARY 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		
	Sub Base Materials	Sieve analysis							
		MDD & OMC							
		PI							
		CBR							
		Field density							
11	Back Fill Material	Sieve analysis							
		MDD & OMC							
		Field density							
		CBR							
12	CS Base	Sieve analysis							
	Crushed Stone Base	MDD & OMC							
	Material Laying	C.B.R.							
		FI + EI							
		LAA							
		SSS							
		ACV/AIV							
		Crossing Ratio							
		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							
	BX100 Bitumen	Softeing point(ring ball)							
	As per DORbook section	Flash point							
	600 Table 6.14/ts 73	Ductility at25.c							
		Specific at 25.c							

SECONDARY TOWN INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

Monthly Laboratory Testing Report

(For The Month OF FEBUARY 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/Abs weight (Wax)							
		Solubility in trichloroethylene							
15	Humpipe Test	Three Edge Bearing Load Test	1	1				2	200mm to 1830mm 1 each
16	Marshall Stability Test	Bulk density							
		Stability							
		Flow							
		Air voides							
		Bitumen extraction							
		Voids in Mineral Agg							
		Job mix in AC Plant							
		Core Field Density							
17	BITUMEN SPREAD TEST								
	Prime coat	Application rate							
	Tack coat	Application rate							
18	Machines/Equipment								
	Calibration of compressive		1					1	
	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 Density/ Optimum Moisture Content; LAA = Los Angeles Abrasion; AIV=Aggregate Impact Value; SE=Sand Equivelent; JMC=Job Mix Formula; SSS = Sodium Sulphate Soundness; ACV = Aggregate Crushing Value; CBR=California Bearing Ratio

Contractor Reps
CTCE-KALIKA J/V
Prepared By QC Manager
Submitted by Project Manager

Consultant Reps
SMEC-Brisbane-AQUA-CEMAT-BDA
Test Checked by Junior Engineer
Approved by CSI