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

Project Directorate (ADB)

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

Monthly Progress Report – 26

January,2016

Consultants:

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

CTCE/KALIKA JOINT VENTURE

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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
VO-1	NRs 99,753,075.60
Revised Grand Total Contract amount with VAT&PS	NRs 2,491,085,601.50

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 bythe 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 toaccess to the Site, or other related matters, where his opinion differ significantly from
d. Preparation of stockyards for pipes, fittings and other materials and equipment.
e. To take all steps necessary for the temporary or permanent diversion of services andthe maintenance of services during the execution of the Works, including diversion ofoverhead with underground power lines, telephone ducts, water supply mains

anddistribution lines (pipes), sewers and other underground services as required alongthe 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 forensuring that all procedures are adequately covered and that the materials fullyconfirm to the Contract requirements. These responsibilities will include allnecessary charges or dues related to insurance, freight, taxes (including customs andexcise 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, thecontractor shall provide all suitable facilities and accommodation for the staff andworkmen and he shall make provision for all costs related to such provisions and formedical, re-location, taxes or other expenses.

h. To provide all equipment, machinery, tools etc. and related spares, maintenance andconsumables necessary for implementation of the Works.

i. To provide all site offices, stores, workshops and facilities necessary for use by theEmployer, 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 shallinclude: excavation, provision, haulage and installation of suitable bedding andbackfill material and disposal of surplus excavated material; distribution, laying adjoining of pipes; installation of all special pipework, valves etc. and construction ofall related concrete or other activities together with all testing and disinfection ofcompleted Works. The Contractor's attention is drawn to the restricted working space between RajbanshiChowk 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 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	965.98	3580	1,198.98	1,198.98			
	B1L2	1148.98		744.00	852.00	108.00		
	B1L2A	465.77		490.00	490.00			
	B1L2B	137.09		137.00	137.00			
	B1L2C				-			
	B1L2D	490.97		500.00	500.00			
	B1L2F	371.22		370.00	370.00			
					-			
B2	B2L1	1425	3742	1,088.00	1,338.00	250.00		
	B2L2	828.03		828.00	828.00			
	B2L2C	639.22		631.00	631.00			
	B2L1B	849.47		850.00	850.00			
					-			
B3	B3L1A	422.96	3514	420.96	420.96			
	B3L1B	421.1		421.10	421.10			
	B3L1	669.7		603.00	603.00			
	B3L2	691.56		522.80	666.80	144.00		
	B3L2E	220.42		200.00	200.00			
	B3L3	578.74		578.00	578.00			
	B3L4	509.5		509.50	509.50			
					-			
S9	S9L1	2981.85	3178	660.00	810.00	150.00		
	S9L1D	195.65			-			
					-			
S11	S11L1	794	2092	594.00	594.00			
	S11L1A	265.75		265.75	265.75			
	S11L1B	107.5		107.50	107.50			
	S11L2	925		650.00	650.00			
					-			
S13	S13L2	1262	5640	991.00	1,121.00	130.00		
	S131A	918.23		768.00	768.00			
	S13L1B	276		276.00	276.00			
	S13L1C	284		284.00	284.00			
	S13L1D	535.04		535.04	535.04			
	S13L1E	672.02		342.02	342.02			
	S13L1F	1048		723.00	723.00			
	Hume Pip	645		545.00	545.00			
					-			
CN2	CN2L2	949.23	2273	915.00	915.00			
	CN2L1	994.5		325.00	415.00	90.00		
	CN2L1A	134.02			-			
	CN2L1B	195.27			-			

Drain	Lines	Length	Total Length (m)	Drain Construction (m)				Remarks
				Till Previous Month	Till This Month	This Month Work	Plan for Next Month	
					-			
CN3	CN3L1	715.91	2170	715.91	715.91			
	CN3L2	997.5		475.00	475.00			
					-			
S5	S5L1A	364.07	740		150.00	150.00		
	S5L1B	376			-			
					-			
Rani	L5	796	8483	630.00	630.00			
	L2M	266		141.00	141.00			
	L2J	526		290.00	290.00			
	L3	416		266.00	266.00			
	L4	2311		174.00	214.00	40.00		
	L4C	381		381.00	381.00			
	L4D	381		345.00	345.00			
	L6	1170		349.00	349.00			
					-			
Road Side Drains	R2	6000	6000	6,325.00	6,325.00			
	R5	740	740	700.00	700.00			
	R64	121	121	121.00	121.00			
	T3L28	250	250		250.00	250.00		
	T2L19C		0		250.00	250.00		
	T3L26C	461	461		210.00	210.00		
	T3L37		0		300.00	300.00		
Total Length					**31,058.56**	**2,072.00**		

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	1,815.00	1,815.00	-	600.00	22				
T2 Trunk 900 dia hume pipe			518	518.00	518.00	-		15				
T3 Trunk 700 dia hume Pipe			1472	1,290.00	1,290.00	-	400.00	30				
T3 Trunk 600 dia hume Pipe			1141	187.00	187.00	-	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					**4,155.00**	-						
T1 Sec												
	14				139.60	139.60		5				
	15				209.00	209.00		7				
	17		1353		232.20	232.20		8				
	17A				77.80	77.80		3				
	17B				83.80	83.80		3				
	17C				79.80	79.80		3				
T2 Sec												
	18L			74.70	74.70	-		2				
	18P			139.60	139.60	-		5				
	18Q			195.40	195.40	-		7				
	18R			357.30	357.30	-		12				
	18V			54.80	54.80	-		2				
	18Y			170.80	170.80	-		6				
	18Z			46.60	46.60	-		2				
	19b			272.30	272.30	-		9				
	19c			276.30	276.30	-		9				
	19e			160.50	160.50	-		5				
	19f			204.10	204.10	-		7	14.00			
	19g			67.80	67.80	-		2	4.00			
	19h			181.40	181.40	-		6	12.00			
	19j			355.00	355.00	-		12	24.00	12.00		
	19k			172.50	172.50	-		6				
	19l			210.30	210.30	-		7				
	19ma			179.40	179.40	-		6				
	19mb			232.35	232.35	-		8				
	19n			162.50	162.50	-		5				
	19o			114.70	114.70	-		4				
	19p		27128	140.90	140.90	-		5				
	19q			234.20	234.20	-		8				
	19r			264.20	264.20	-		9				
	19s			271.00	271.00	-		9				
	19t			179.50	179.50	-		6		18.00	145.00	
	19u			61.80	61.80	-		2				
	19R			110.70	110.70	-		4				
	19T			137.60	137.60	-		5				
	19U			61.80	61.80	-		2				
	19V			208.30	208.30	-		7				
	19W			50.80	50.80	-		2				
	19X			49.80	49.80	-		2				
	19Y			86.70	86.70	-		3				
	19Z			66.80	66.80	-		2				
	22			260.10	260.10	-		9	10.00			
	23			217.00	217.00	-		7	6.00			
	24A			260.70	260.70	-		9	20.00	4.00		
	29				296.90	296.90		10				
	18j				232.20	232.20		8				
	18QS				240.00	240.00		8				
	19K				367.90	367.90		12				
						-		-				

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	
T3 Sec						-		-				
	13F			123.60	123.60	-		4				
	25B			201.40	201.40	-		7				
	25C			139.60	139.60	-		5	9.00			
	26			126.50	126.50	-		4				
	26A			65.80	65.80	-		2				
	26B			71.80	71.80	-		2				
	26C			334.10	334.10	-		11				
	26D			50.80	50.80	-		2				
	26E			358.80	358.80	-		12				
	26F			108.60	108.60	-		4				
	26G			70.80	70.80	-		2				
	26H			55.60	55.60	-		2				
	27		23070	281.00	281.00	-		9				
	28			247.10	247.10	-		8				
	29			73.80	73.80	-		2				
	30			245.10	245.10	-		8				
	31			174.40	174.40	-		6				
	31A			171.50	171.50	-		6				
	32			219.20	219.20	-		7				
	33			391.80	391.80	-		13	25.00	35.00		
	33A			121.20	121.20	-		4				
	33B			161.00	161.00	-		5				
	34			312.70	312.70	-		10	14.00	12.00		
	35			223.30	223.30	-		7	14.00	15.00		
	36			160.50	160.50	-		5				
	37			204.30	204.30	-		7				
						-						
Total Length of HDPE Pipe					**12,122**	**1,959**		**405**	**152**	**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	0	515m		
4	Boundary wall construction	0	580 m		
5	Office cum lab building, WWTP, Jatuwa	All complete except finishing works			
5	Workshop Building & Generator/Changing Building, WWTP, Jatuwa	All complete except finishing works			
6	Sump Well	Partially excavated			

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	58300	62300	4000	
2	Precuts	Nos.	5647	6207	560	
3	Kerb Stone	Nos.	17850	18640	790	

e) Production of Precast Chambers at Yard Katahari

S.N.	Description	Unit	Quantity		Remarks
			Till This Month	This Month Work	
1	Manhole	Set	949	112	
2	Sewer Inlet	Set	1059	62	
3	House Connection	Set	1160	31	

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

SN	1	2	3	4	5	6	7	8	9	10	11
Diameter	200mm ϕ	300mm ϕ	350mm ϕ	400mm ϕ	450mm ϕ	500mm ϕ	600mm ϕ	700mm ϕ	900mm ϕ	1000mm ϕ	1600mm ϕ
No of Moulds	38	3	2	2	2	3	8	8	2	4	2
Production Till Previous Month	2103	271	179	313	80	475	832	1200	228	963	336
This Month Production	14	17	7	15	0	17	14	29	14	16	9
Total Production	2117	288	186	328	80	492	846	1229	242	979	345

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
IPC 10	124,715,663.77		IPC 10
IPC 11	160,083,476.07		IPC 11
IPC 12	16,931,906.24		IPC 12
Total amount of Ipc=	**827,857,583.27**	**33.23**	Corrected Percentage
Total amount of progress work for January=	**60,000,000.00**	**2.41**	
Total Amount=	**887,857,583.27**	**35.64**	

7 Details of Safeguard activities

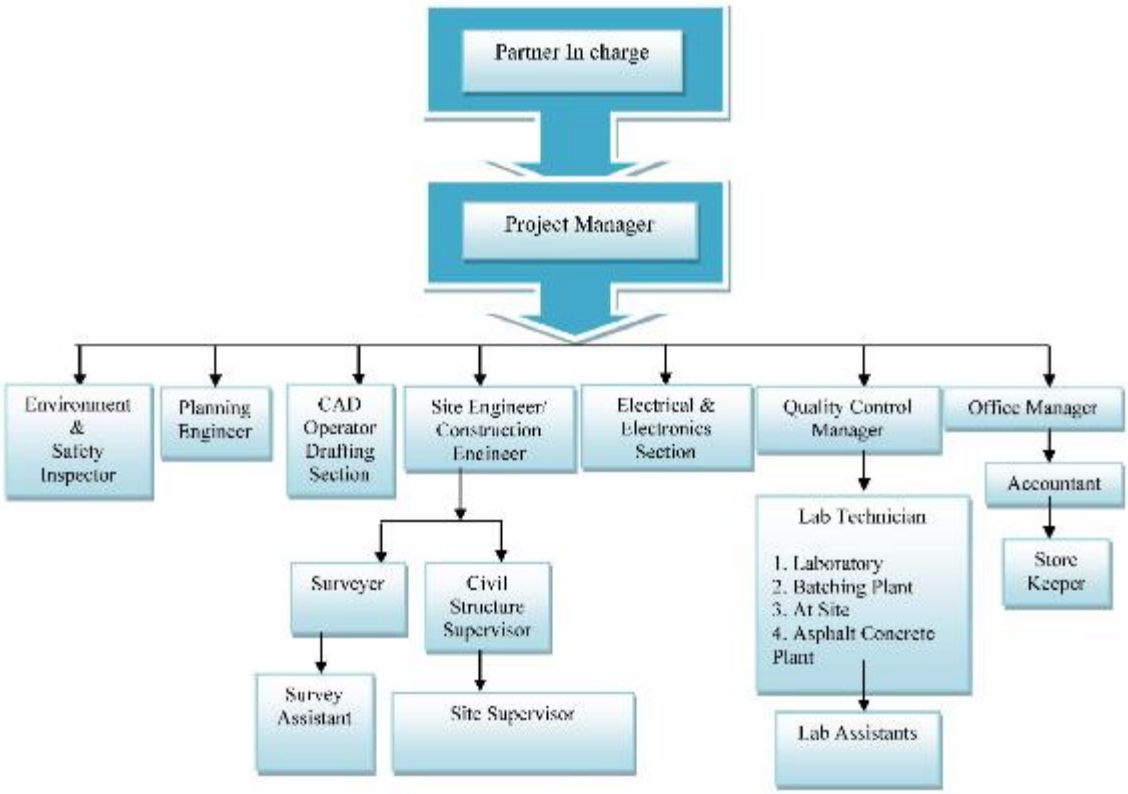
Till the date no such issues have been faced relating to the Social, Environmental and Resettlement matter.

8 Key Issues and Remarks

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

- Partial Contract work is executing in certain site locations with availability of few quantity of Fuel and repeated disturbance of MadeshMorcha.
- Shortage of Fuel and Gas all over Nepal.
- Hume pipe production atItahari is not carrying its production on full flow because of strike conducted by Terai political parties and Boarder blockage done by India.

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	9	7m/ 2f
18	Unskilled Labors	31	25m/ 6f

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	2		
2.	Plumber	2		
3.	Electrician	1		
4.	Bar Bender	2		
5.	Wielder	2		
6.	Scaffold	1		
7.	Drivers	10		
Unskilled Labor				
	Labor	**Male**	**Female**	
1.	Labors (Skilled)	7	2	9
2.	Labors (Unskilled)	25	6	31
Total		32	8	

S.N.	Name	Designation	AttendanceDays
1	UjjwalPrasai	Project Manager	20
2	BisheshPrasai	Engineer	24
3	Santosh Pudasaini	Planning/ Construction Engineer	0
4	Mahesh Subedi	Construction Engineer	20
5	Suresh Maharjan	Construction Engineer	25
6	SujitDahal	Office/Bill Engineer	24
7	Roshan Prasad Gupta	Site Engineer	0
8	NabinKhanal	Site Engineer	0
9	NirajRaut	Site Engineer	25
10	UddhavBhatta	Site Engineer	0
11	Sunil Chaudhary	Quality Control Manager	25
12	VishwoBandhuMainali	Accountant/ Office Manager	25
13	Krishna Adhikari	Jr. Accountant	24
14	Narayan Rijal	Senior Site Supervisor/Safety Manager	18
15	Sagar Shrestha	Junior Engineer	25
16	Dipesh Kumar Chaudhary	Junior Engineer	25
17	Suraj Chaudhary	Junior Engineer	25
18	SumanTamang	Junior Engineer	24
19	Sujan Singh Thakuri	Junior Engineer	24
20	BipinRai	Junior Engineer	25
21	Saroj Shrestha	Junior Engineer	20
22	Suman Shrestha	Junior Engineer	22
23	Bishal Shrestha	Junior Engineer	24
24	Sanjay Shrestha	Junior Engineer	25
25	SabitaThapa	Sub-Overseer	25
26	AngiraRai	Sub-Overseer	0
27	Rojina LG	Sub-Overseer	0
28	GaurabSubba	Sub-Overseer	12
29	Prakash Bhattrai	Sub-Overseer	25
30	PradipRai	Sub-Overseer	25
31	AjayaRai	Site Supervisor	25

32	Uttar Karki	Site Supervisor	24
33	IshowrAdhikari	Site Supervisor	20
34	Santosh Mukhiya	Site Supervisor	25
35	Anil Pokhrel	Site Supervisor	25
36	PrasasanRajbansi	Site Supervisor	25
37	Tanka Pokhrel	Store Manager	25
38	ManojPandit	Store Assistant	25
39	NirnayaUpreti	Store Assistant	25
40	GopiYadav	Store Assistant	25
41	DipeshDahal	Lab Assistant	25
42	Ramesh Koirala	Lab Assistant	25
43	MahakantaRisidev	Lab Assistant	25
44	Sandeep Pyakurel	Light Driver (7621)	24
45	GurucharanYadhav	Light Driver (1082)	20
46	KiranManandhar	Light Driver (1086)	25
47	SatyaDhimal	Light Driver	24
48	Dip Budathoki	Light Driver	25
49	MangalKisku	JCB Operator	25
50	Surya Bdr. Malla	Loader Operator	22
51	Rupana Chaudhary	TM Driver	25
52	BhabeshRai	Batching Operator	20
53	Chandan Roy	Pc-200 Operator	25
54	JeetBdrGurung	Teller (4423) Driver	25
55	AnandaRajbansi	Electrician	25
56	Kamal Yadhav	Electrician	25
57	PappuYadav	Mechanic	25
58	MukeshMandal	Mechanic	25
59	Bhanu Bhakta Kafle	Plumber	22
60	Ganga Ram Dhital	Plumber	25
61	Niroj K. Puri	TM Driver(7561)	20
62	DhanKajiGurung	TM Helper	25
63	IndraRajBansi	Tractor Driver (6204)	25

64	KartikThrau	Tractor Driver (8304)	25
65	TilakGhalan	Transit mixer Driver	25
66	NakkulPaddhar	Tanker Driver	25
67	Udit Narayan	Tanker Driver	25
68	BasudevYadav	Tractor Driver	25
69	SudeepRajbansi	JCB Helper	25
70	Manita Shrestha	Kitchen Helper	25
71	KalpanaTamang	Kitchen Helper	25
72	SitaThapa	Kitchen Helper	25
73	PabitraRai	Kitchen Helper	25

Details of Equipment

S.N.	Particular	Model/Type	Capacity	Working Status		
				No of used Equipment	Status	Remarks
A	**Vehicle and Equipment**					
A.1	**Excavators**					
	CAT Excavator with vibrating compactor PC320	PC320		1	Good	
	Komatsu Long Boom PC200	PC200		1	Good	
	Komatsu Excavator PC200	PC200		2	Good	
	Komatsu Excavator PC120	PC 120		1	Good	
	Kobelko Excavator 75	Kobelko 75		1	Good	
	Cat Excavator 320	Caterpillar		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	1	Good	
	Jeep	Landcrusher	5 door	2	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	

S.N.	Particular	Model/Type	Capacity	Working Status		
				No of used Equipment	Status	Remarks
	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	Good	
	Asphalt Paver Machine			1	Good	

10 Conclusion

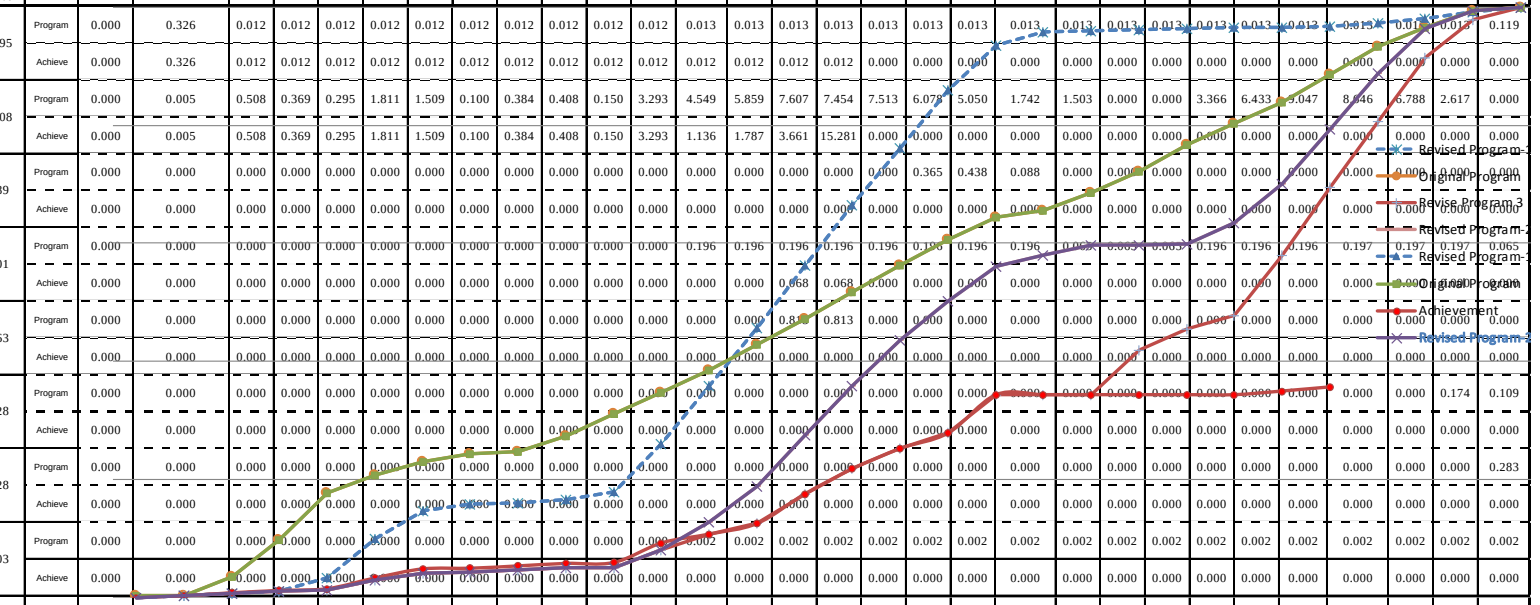
MadeshiMorcha called strike and blockade boarder by India started from 5th August 2015 is still going on tillend of this month which has halted all the contract workactivities.Thestrike has got sever and lengthy while it has not stopped till the end of the month.The casting of precast slabs and chamber unit is not being carried out on full flow at Katahari yard and Hume Pipe production factory, Itahari due to unavailability of material and lack of sufficient fuel.

The strike is severely affecting the progress of the project at the key working season.

ANNEX

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	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	0.012	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	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	6.079	5.050	1.742	1.503	0.000	0.000	3.366	6.433	9.047	8.946	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
	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	3.602	9.884	17.815	20.832	23.051	24.263	24.739	27.449	31.092	34.754	38.454	42.889	47.290	51.750	56.206	60.607	64.409	65.577	68.595	72.253	76.666	80.311	83.908	88.615	93.343	96.493	99.384	100.00
Revised Program-1		%age			0.000	0.286	0.449	0.329	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	0.644	0.601	1.227	0.787
		Cumulative %age			0.000	0.286	0.735	1.064	3.352	9.958	14.764	15.767	15.950	16.526	17.942	26.016	35.826	45.709	56.375	66.431	76.156	86.021	93.466	95.750	95.997	96.156	96.301	96.446	96.591	96.736	97.380	97.981	99.208	100.00
Revised Program-2		%age			0.000	0.286	0.449	0.329	0.265	1.575	1.314	0.097	0.343	0.363	0.140	2.855	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	9.423	7.700	3.002	0.577
		Cumulative %age			0.000	0.286	0.735	1.064	1.329	2.904	4.218	4.315	4.658	5.021	5.161	8.016	12.776	18.845	27.476	35.953	43.677	50.331	56.030	58.070	59.651	59.730	59.809	63.386	70.029	79.286	88.709	96.409	99.411	99.988
Revise Program 3		%age			0.000	0.286	0.449	0.329	0.265	1.575	1.314	0.097	0.343	0.363	0.140	2.855	0.991	2.712	3.232	3.939	2.764	2.246	5.421	0.302	0.302	7.530	3.600	2.320	10.210	11.470	11.165	10.790	10.360	2.630
		Cumulative %age			0.000	0.286	0.735	1.064	1.329	2.904	4.218	4.315	4.658	5.021	5.161	8.016	10.770	12.570	17.570	21.820	25.250	27.850	34.317	34.317	34.317	41.847	45.447	47.767	58.037	69.507	80.672	91.462	97.820	100.000
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	4.540	0.350	0.302	0.000	0.000	0.000	0.623	0.700	0.000	0.000	0.000	0.000
		Cumulative %age			0.000	0.331	0.851	1.232	1.539	3.362	4.883	4.996	5.392	5.813	5.975	9.280	10.770	12.570	17.570	21.820	25.250	27.850	34.317	34.317	34.317	34.317	34.317	34.317	34.940	35.640				



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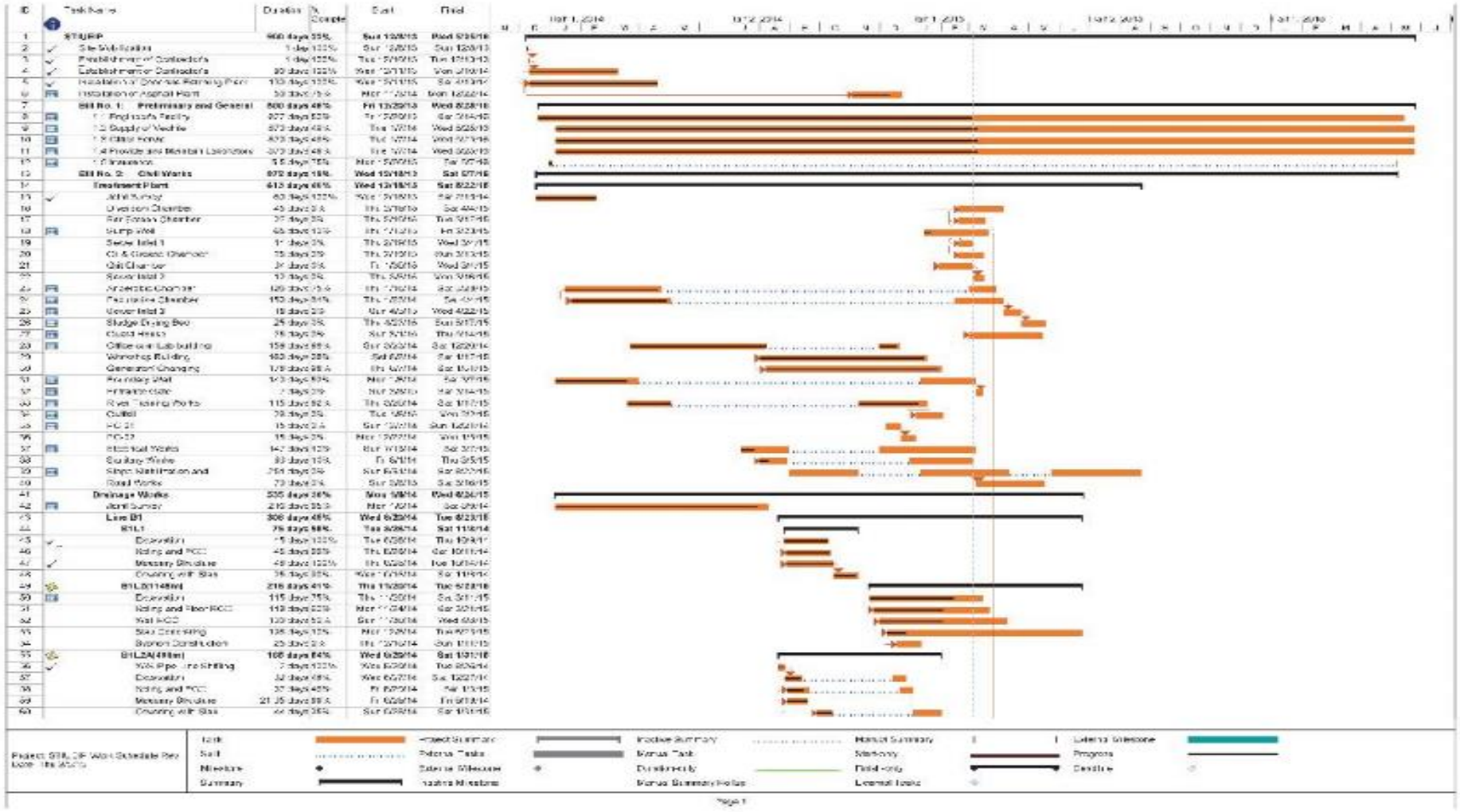
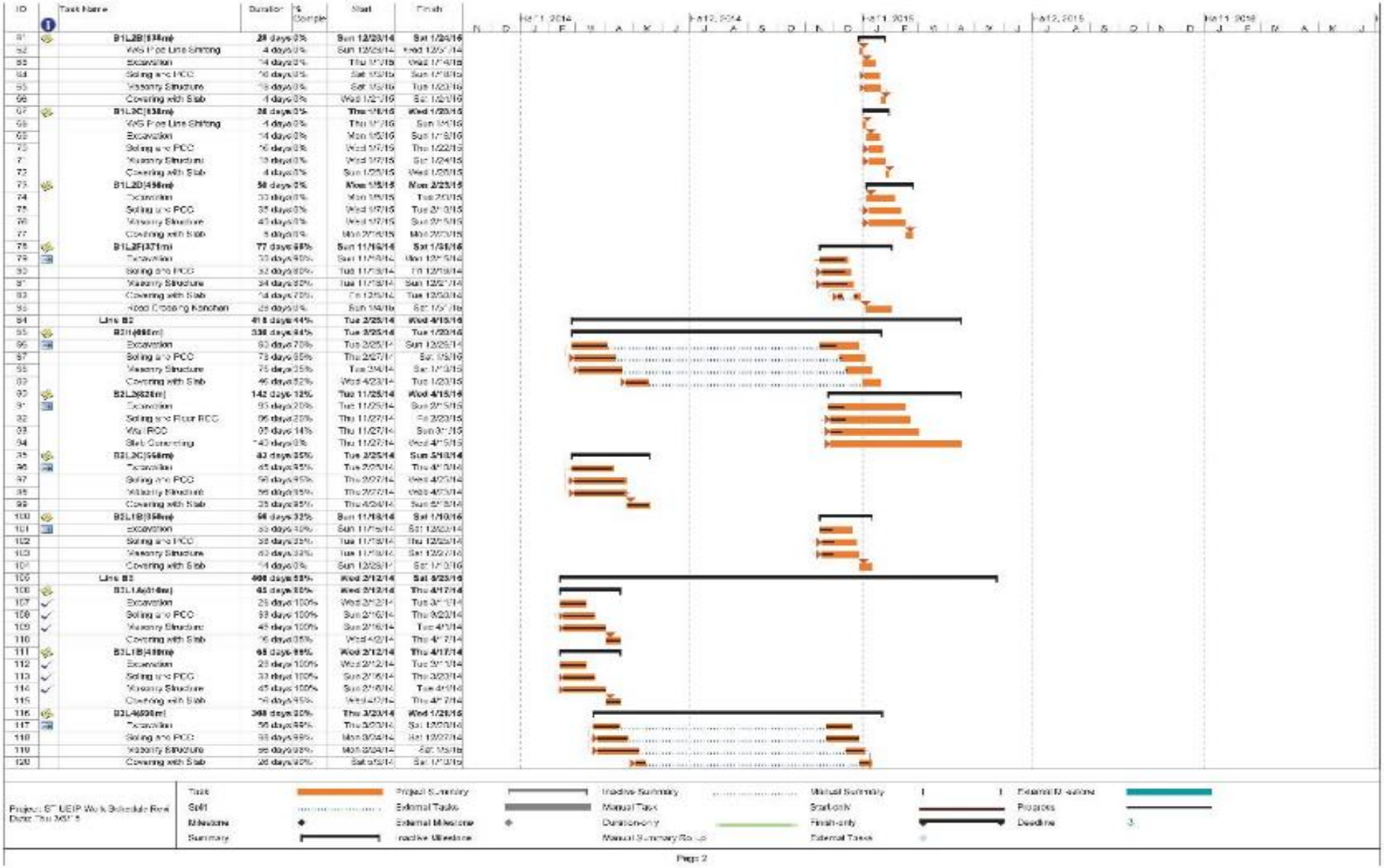
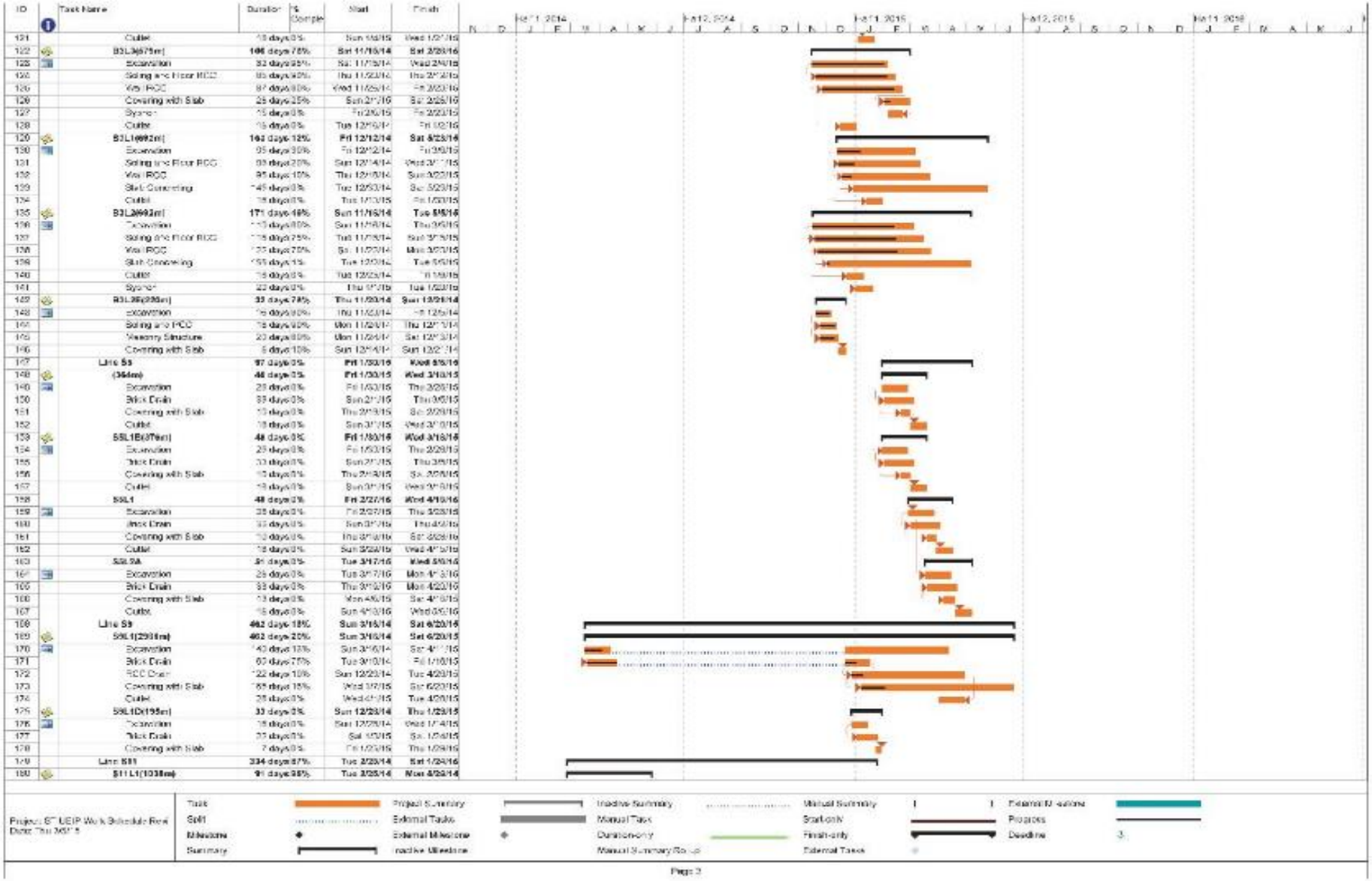
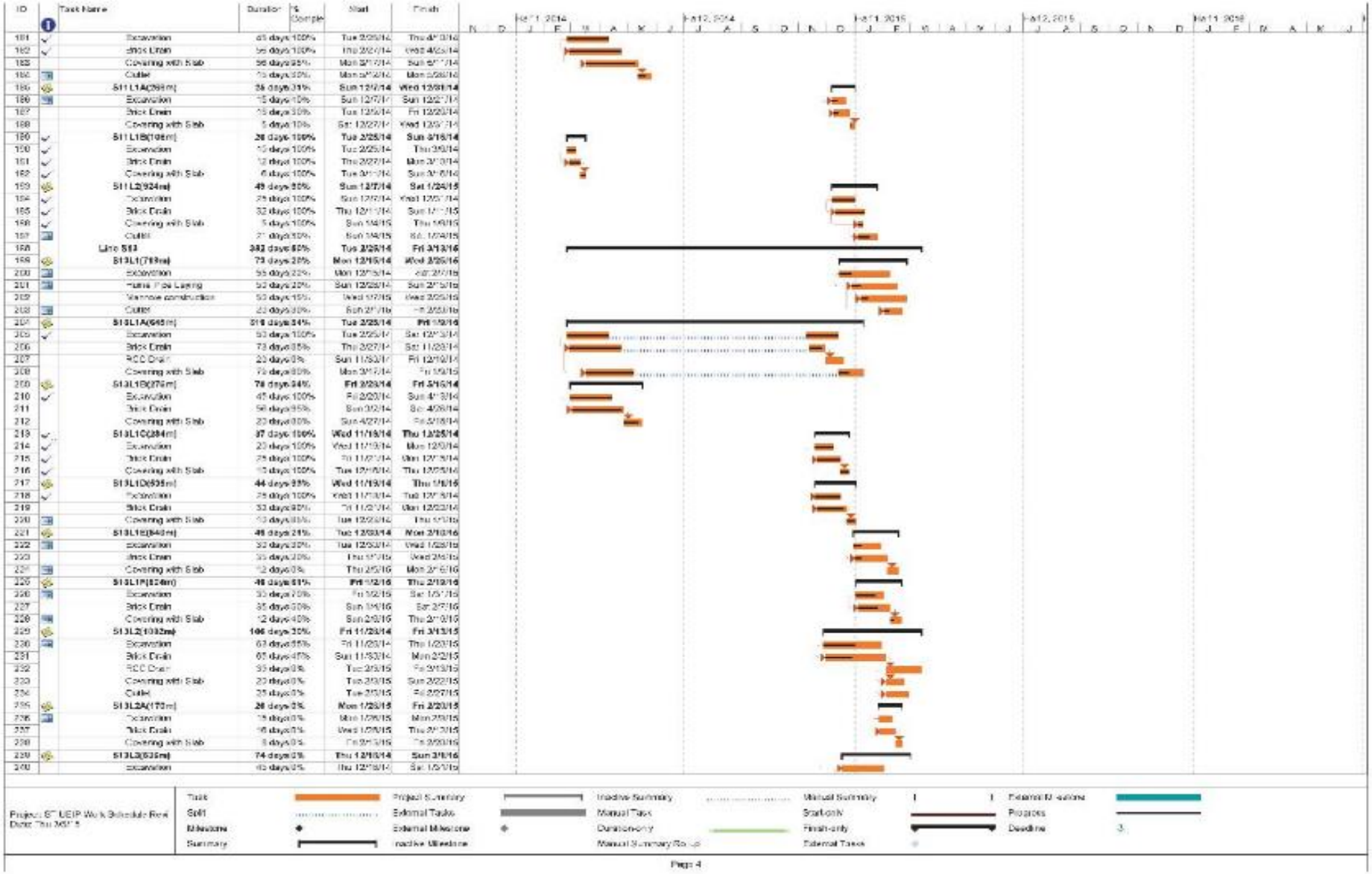
Site Office: Katahari, Judi

Work Schedule and Progress









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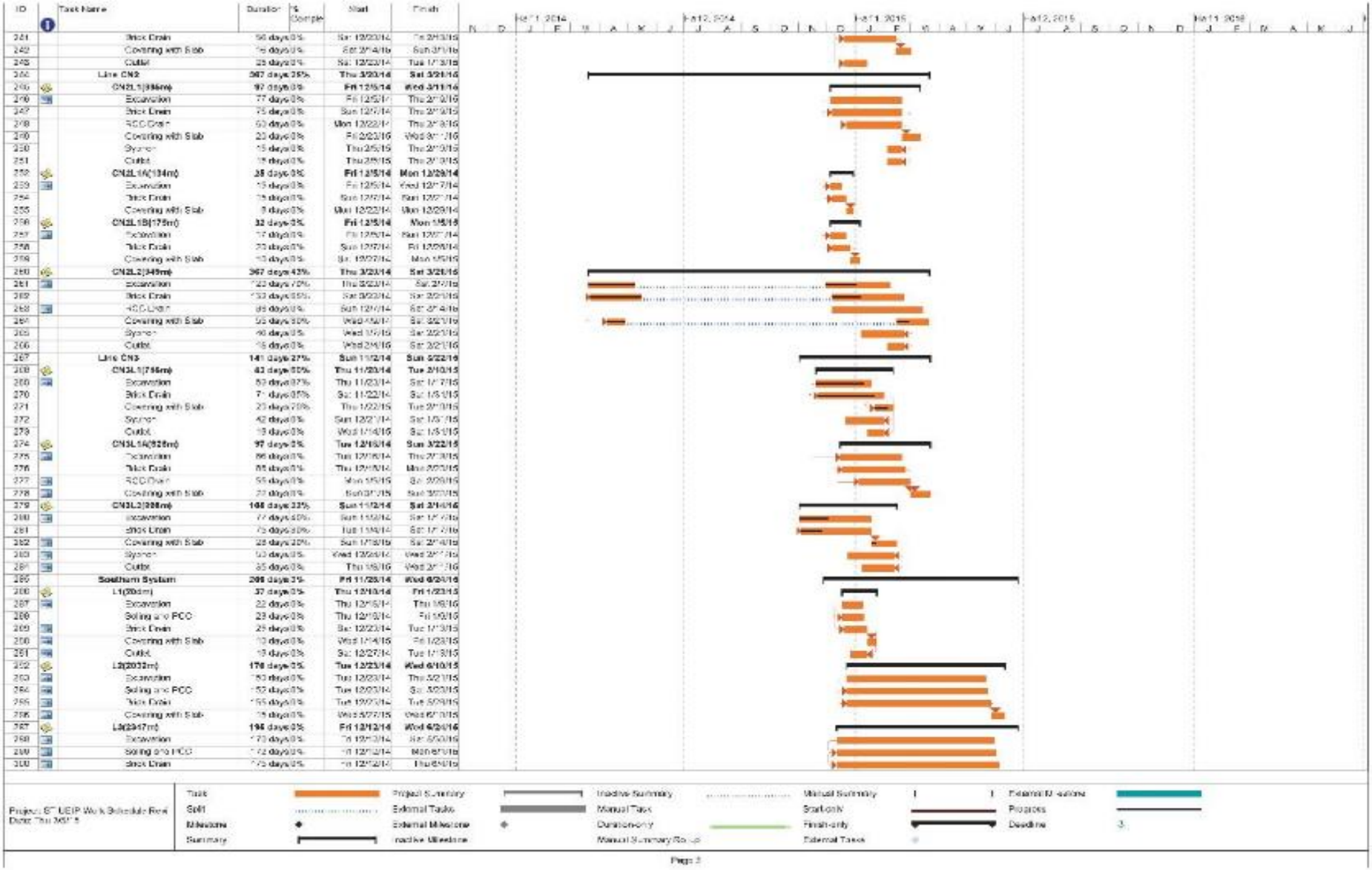

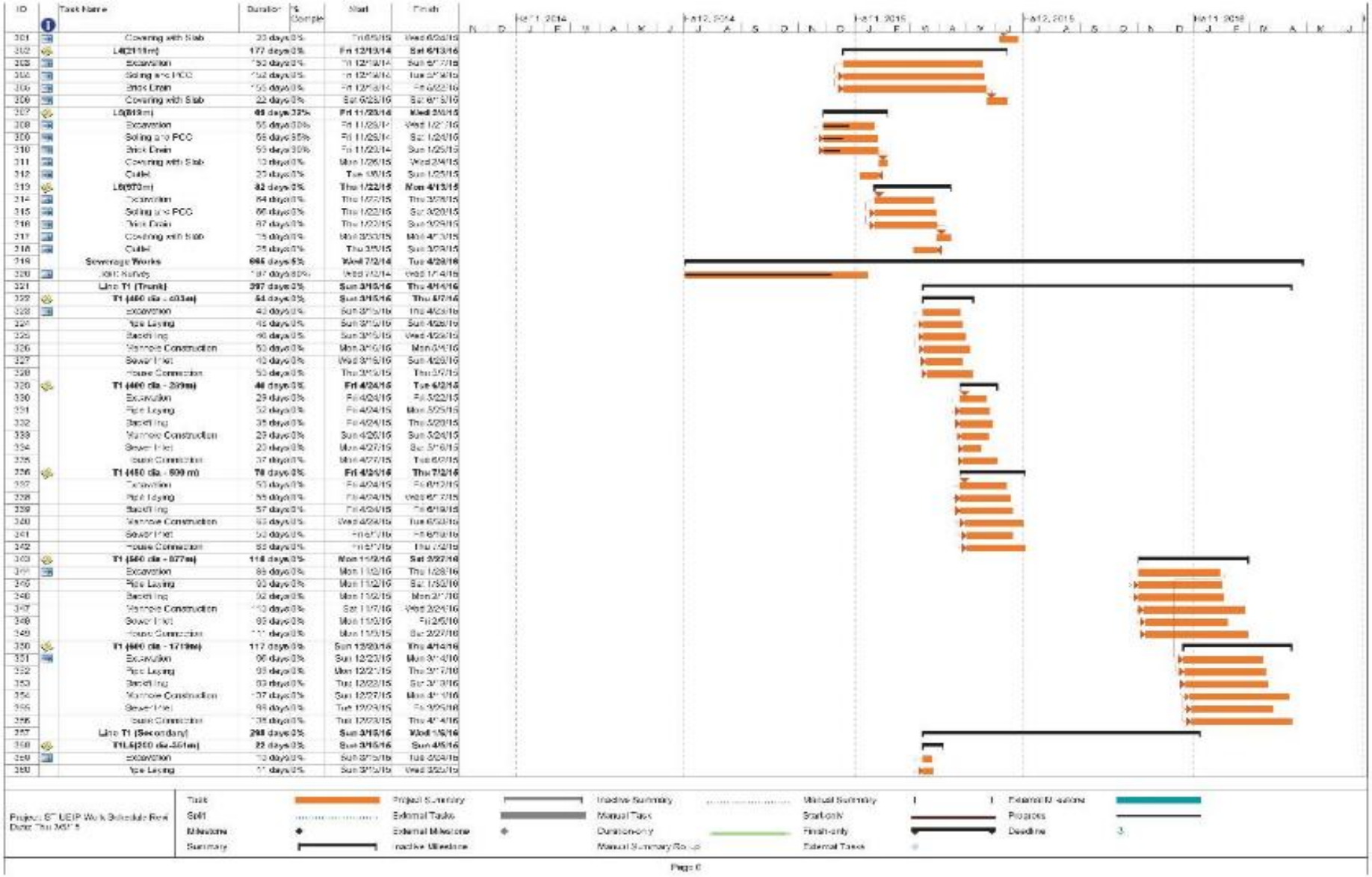

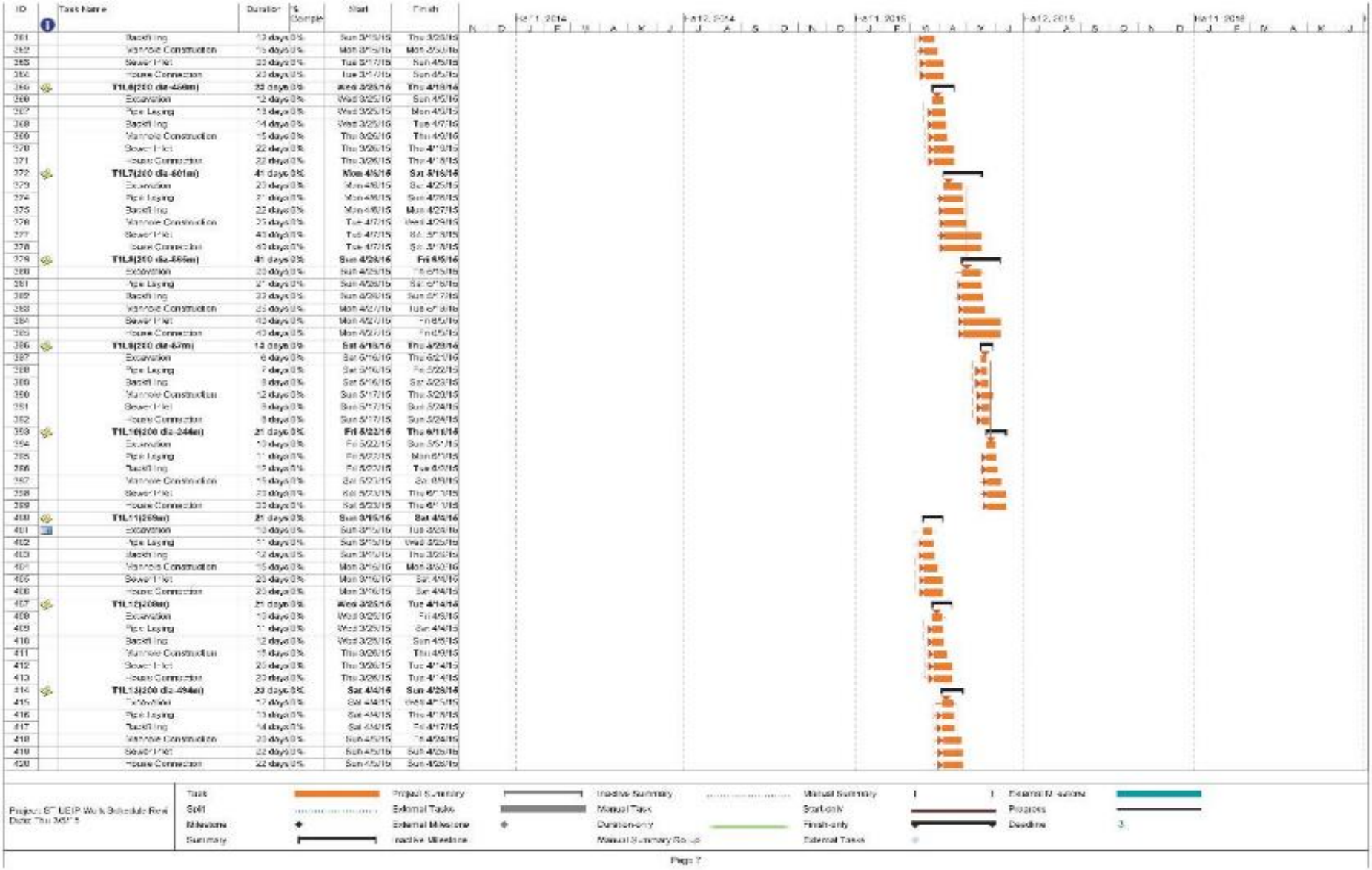

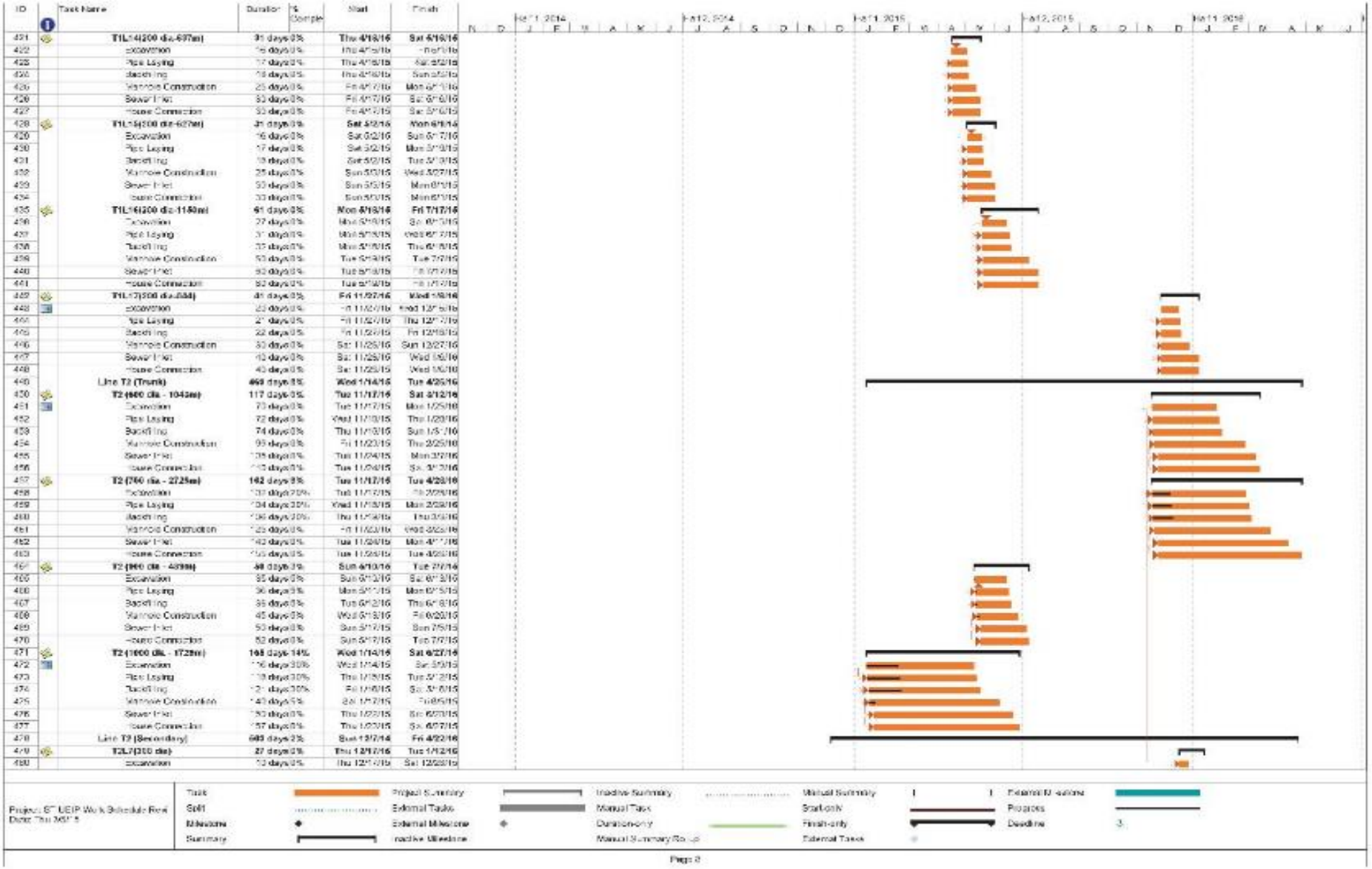

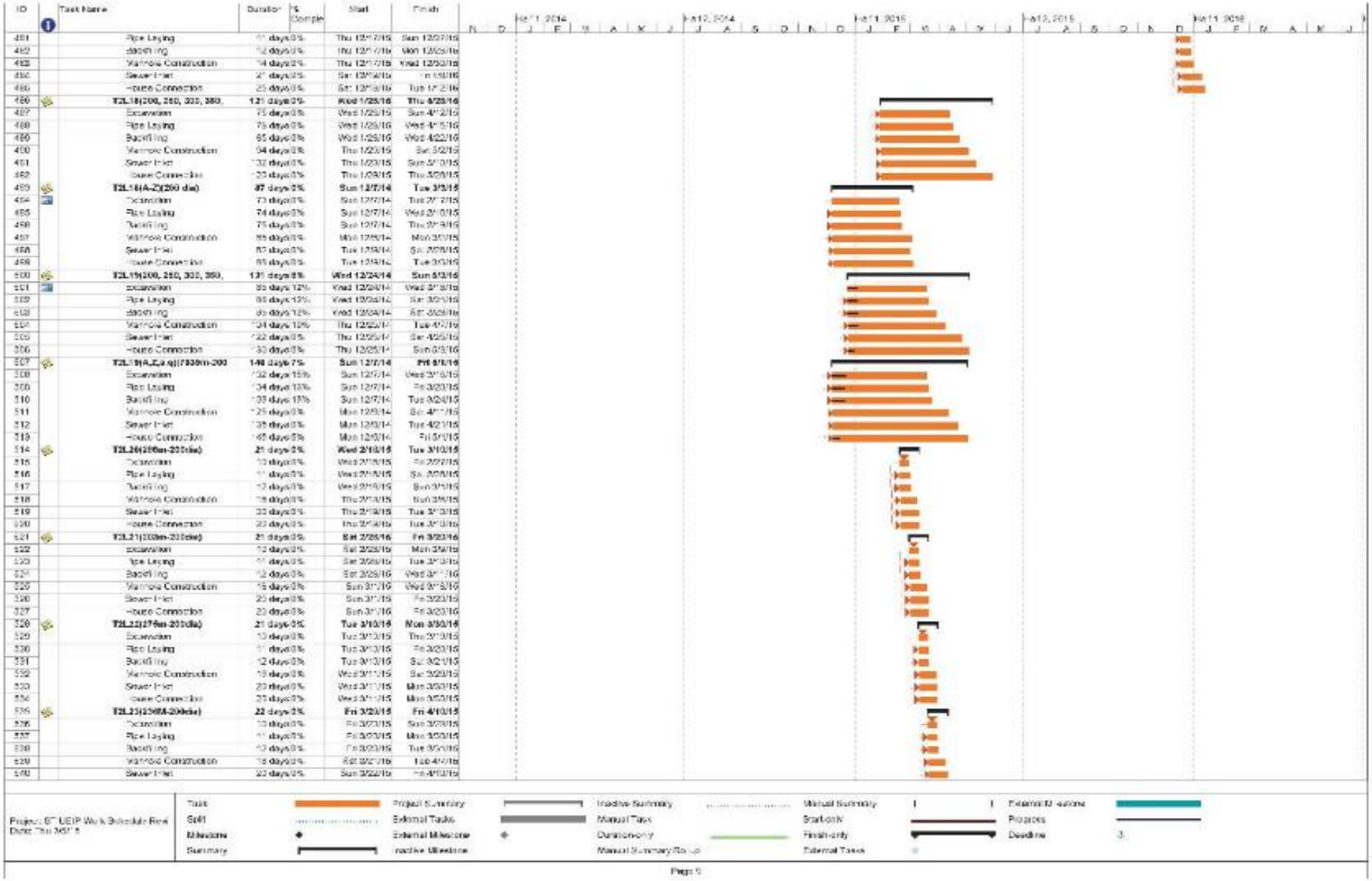

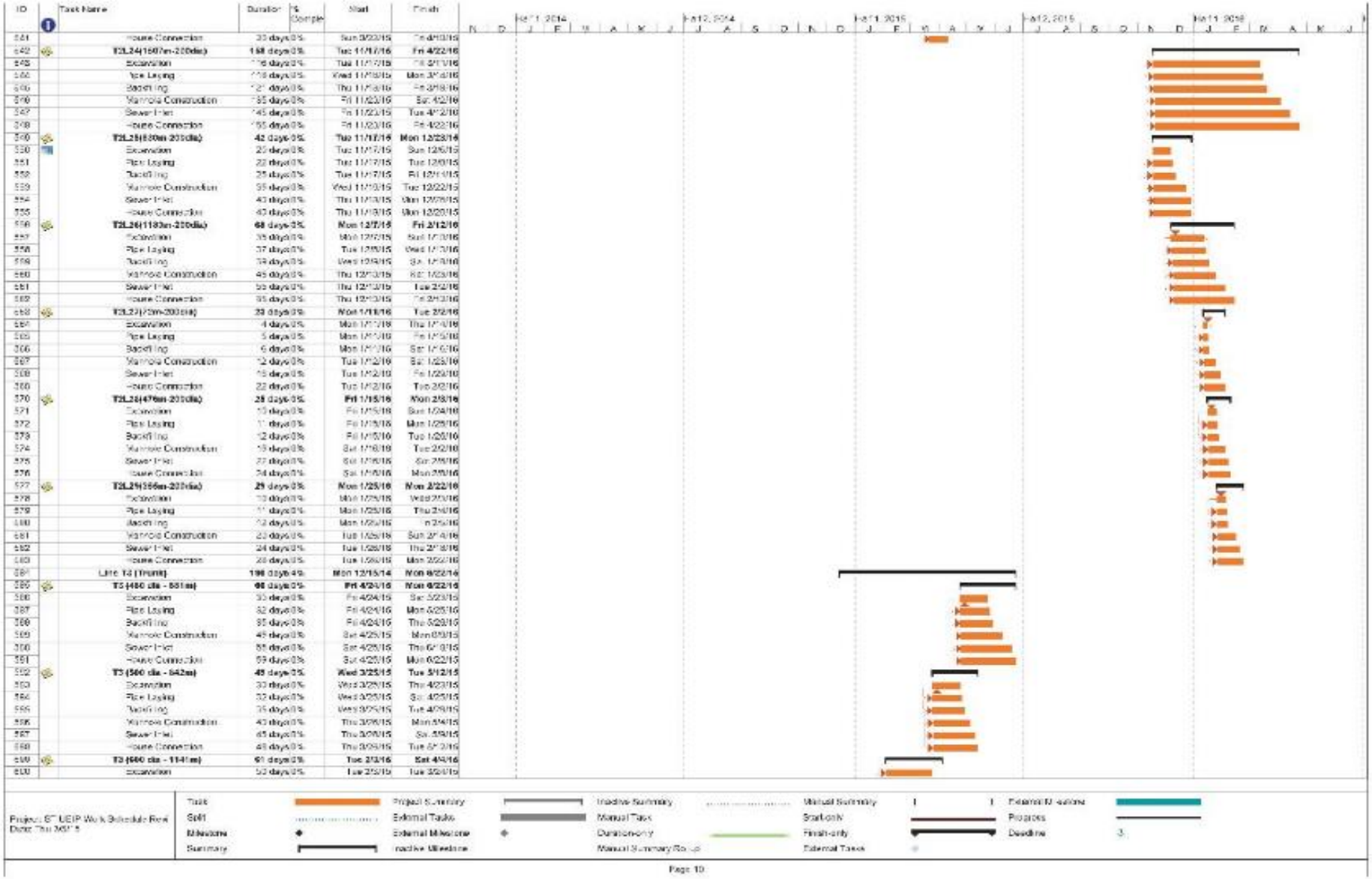

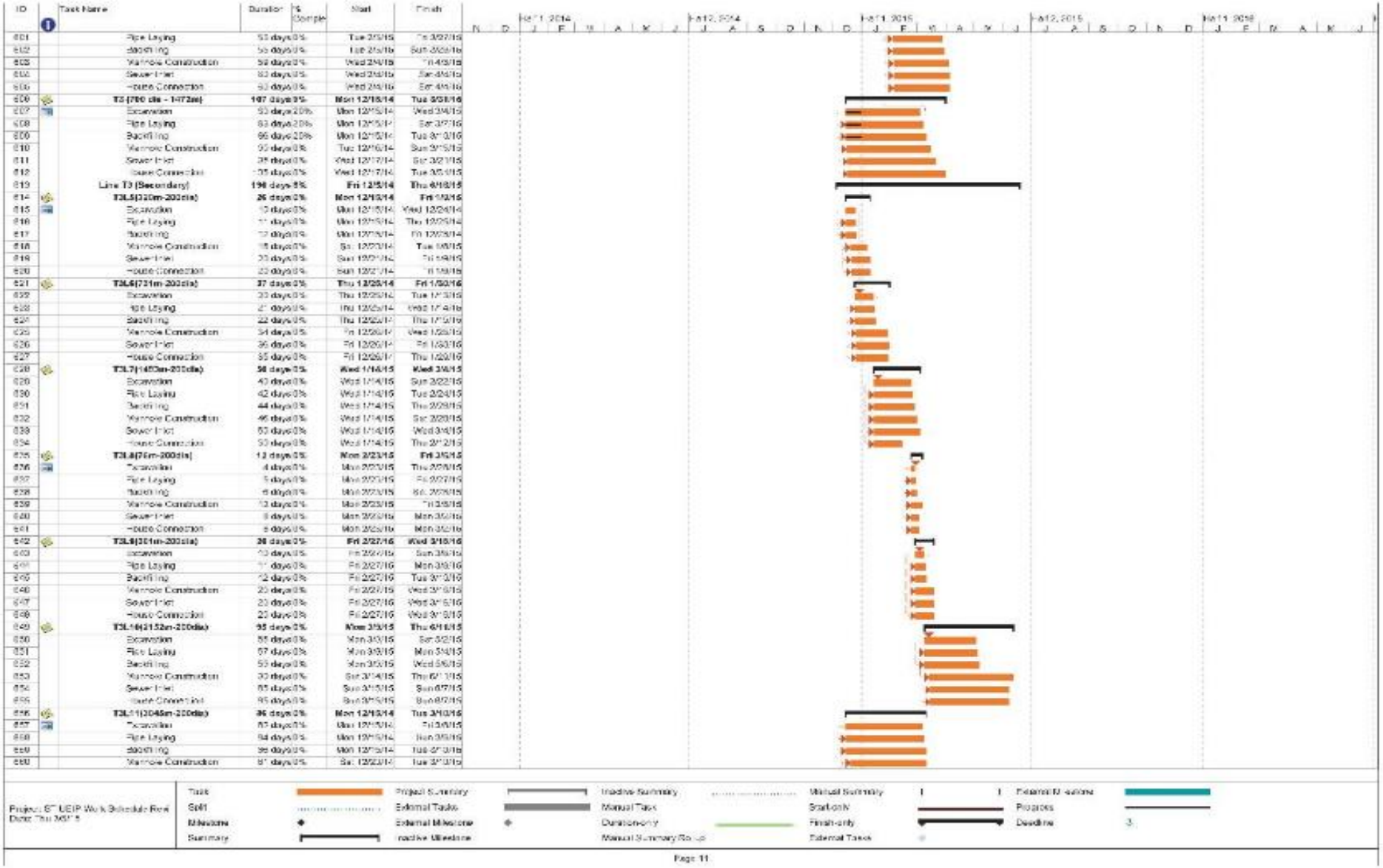

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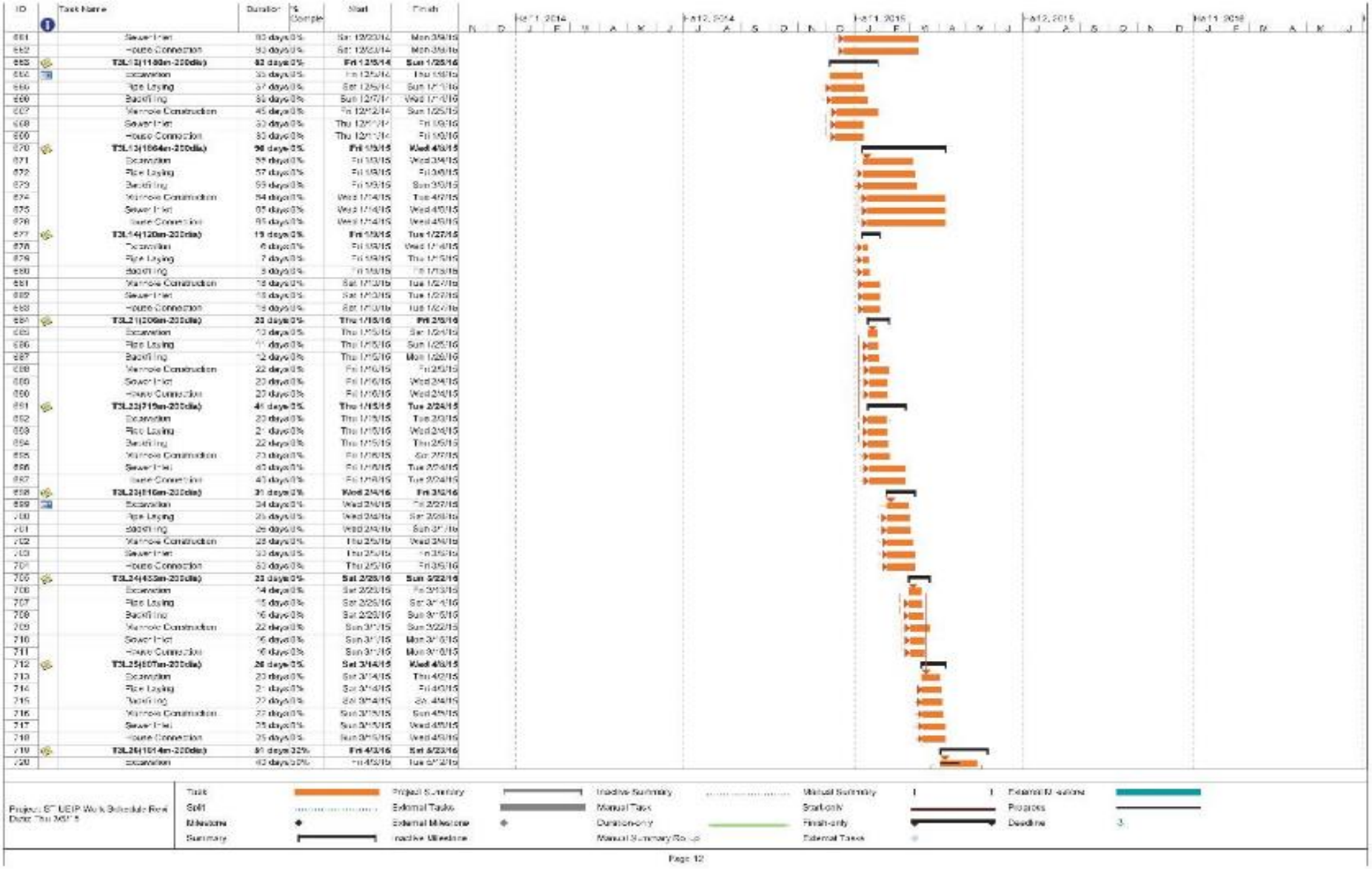

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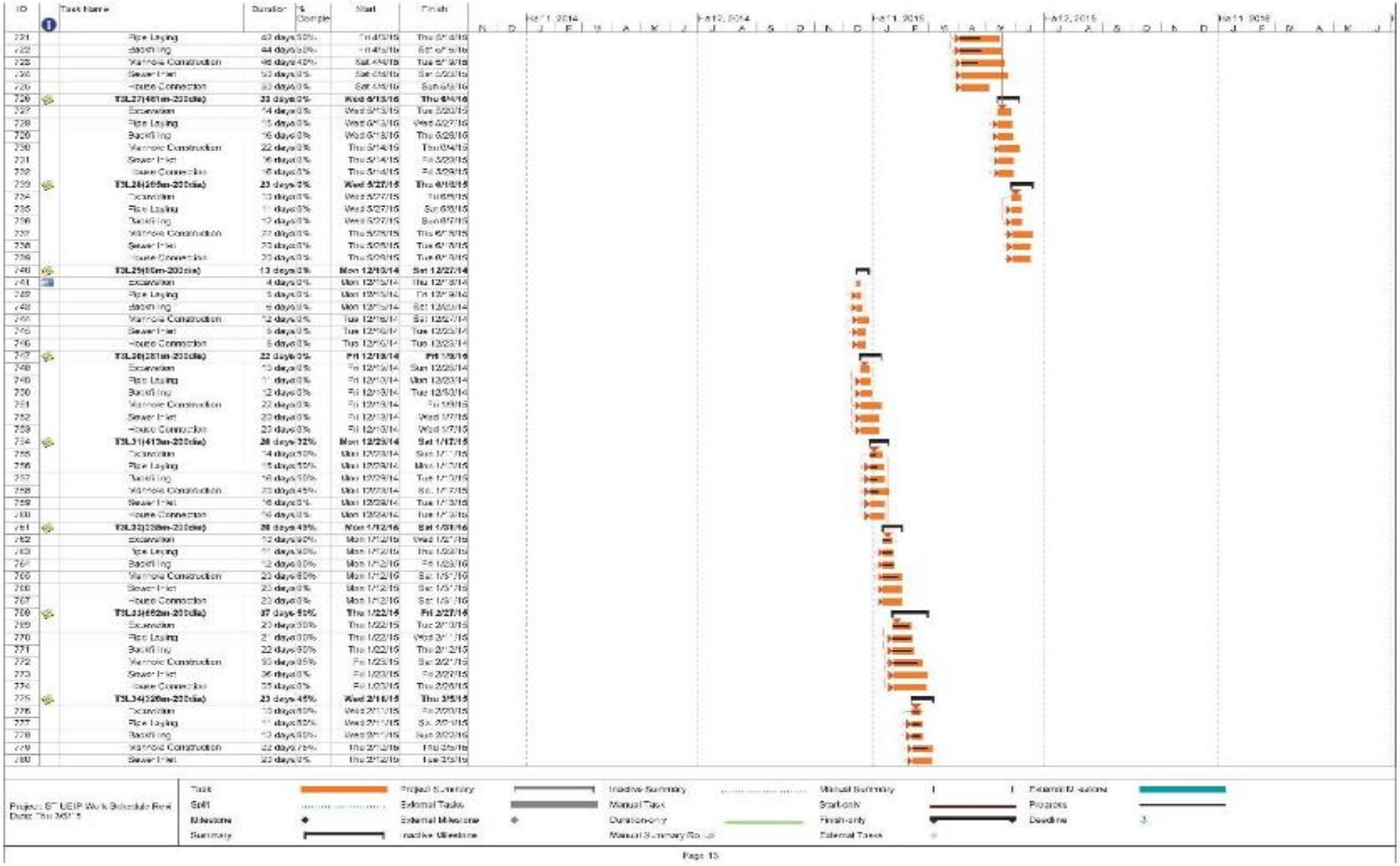

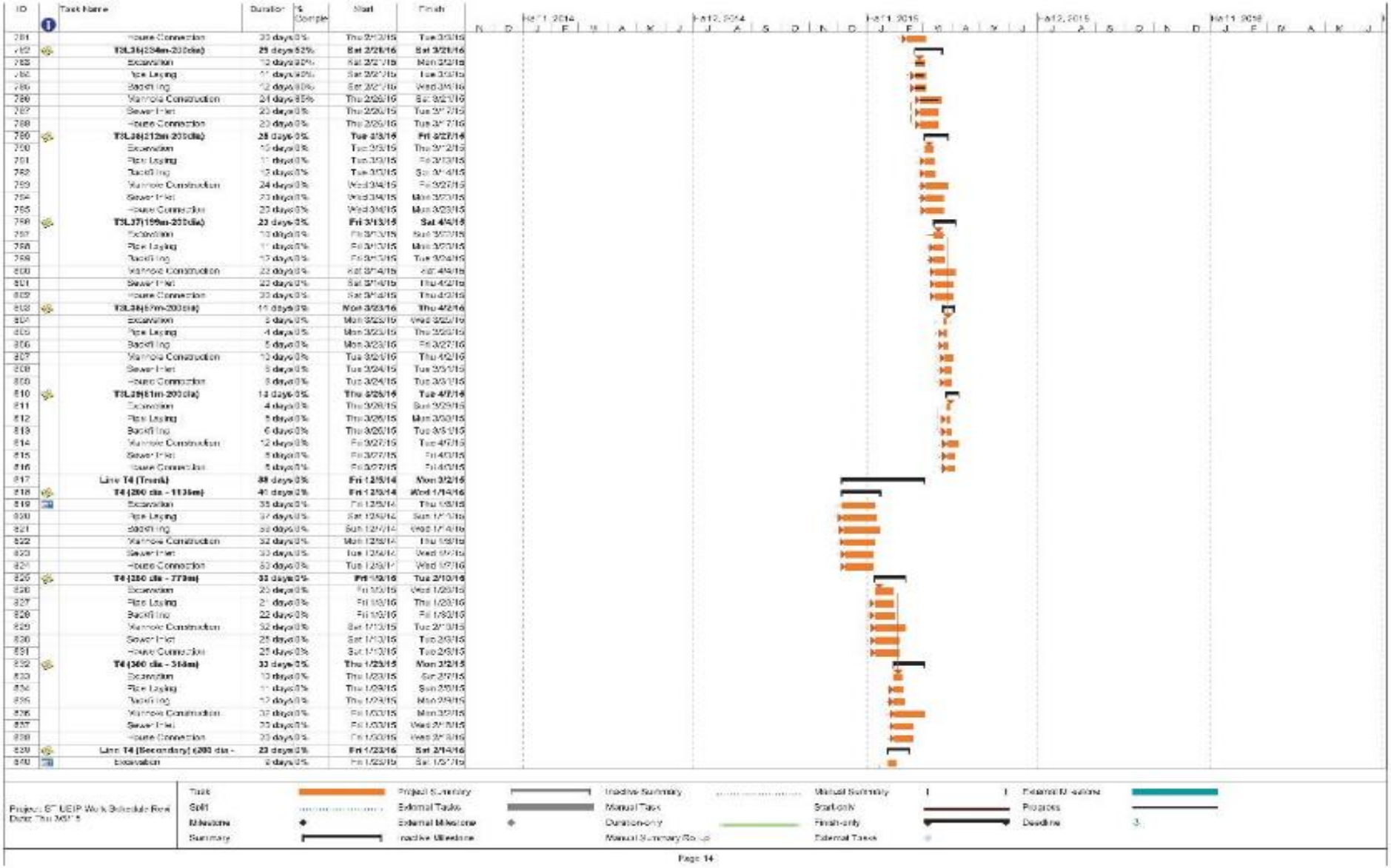

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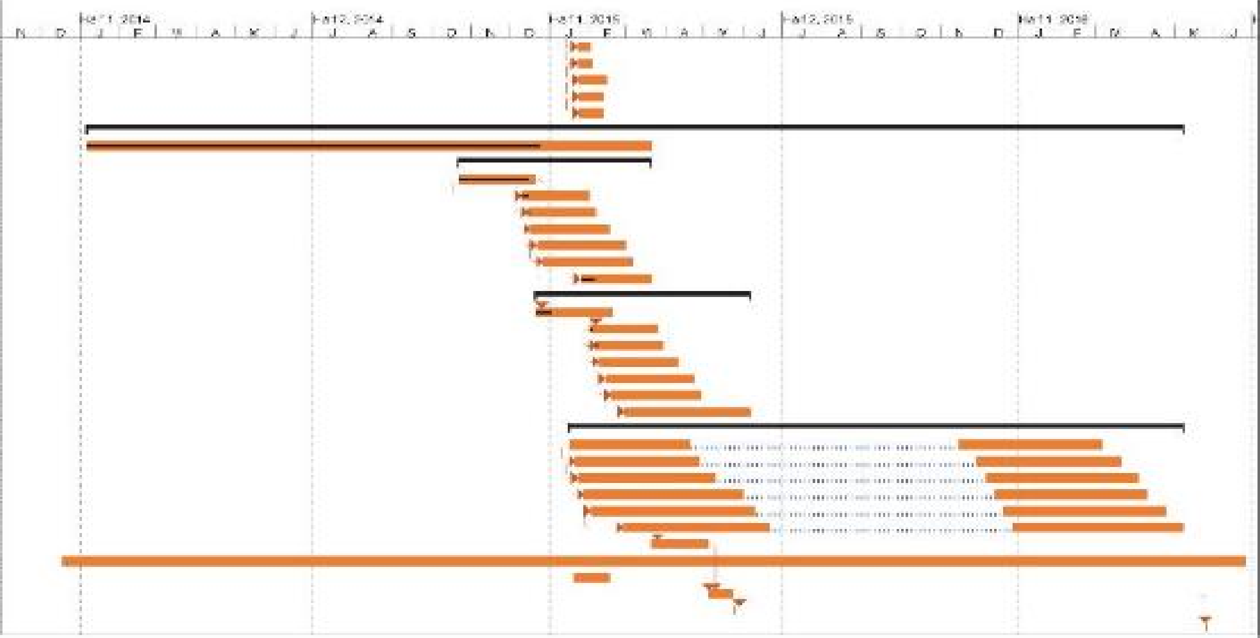
Site Office: Katahari, Judi

ID		Task Name	Duration	% Complete	Start	Finish
841		Pipe Laying	10 days	0%	Fri 1/23/15	Sun 2/1/15
842		Backfilling	11 days	0%	Fri 1/23/15	Mon 2/2/15
843		Manhole Construction	22 days	0%	Sat 1/24/15	Sat 2/14/15
844		Sewer Inlet	19 days	0%	Sat 1/24/15	Wed 2/11/15
845		House Connection	19 days	0%	Sat 1/24/15	Wed 2/11/15
846		**Road Works**	**853 days**	**15%**	**Mon 1/6/14**	**Sat 5/7/16**
847		Joint Survey	440 days	80%	Mon 1/6/14	Sat 3/21/15
848		**R2(Pashupati to Bhatta Chowk)**	**158 days**	**17%**	**Wed 10/22/14**	**Fri 3/20/15**
849		Side Drain Cleaning and	60 days	80%	Wed 10/22/14	Sat 12/20/14
850		Earthworks	53 days	10%	Wed 12/10/14	Sat 1/31/15
851		Sub grade preparation	53 days	2%	Mon 12/15/14	Thu 2/5/15
852		Sub Base	62 days	0%	Wed 12/17/14	Mon 2/16/15
853		Base	69 days	0%	Mon 12/22/14	Sat 2/28/15
854		Asphalt Concrete	73 days	0%	Sat 12/27/14	Fri 3/6/15
855		Other Road Works	55 days	20%	Sun 1/25/15	Fri 3/20/15
856		**R2(Bhatta Chowk to**	**167 days**	**3%**	**Sun 12/21/14**	**Fri 6/5/15**
857		Side Drain Cleaning and	53 days	20%	Sun 12/21/14	Wed 2/18/15
858		Earthworks	53 days	5%	Sun 2/1/15	Wed 3/25/15
859		Sub grade preparation	53 days	2%	Fri 2/6/15	Mon 3/30/15
860		Sub Base	62 days	0%	Mon 2/9/15	Fri 4/10/15
861		Base	69 days	0%	Fri 2/13/15	Wed 4/22/15
862		Asphalt Concrete	73 days	0%	Wed 2/18/15	Tue 4/28/15
863		Other Road Works	98 days	0%	Sat 2/28/15	Fri 6/5/15
864		**All Roads between Tinpiple,**	**478 days**	**0%**	**Fri 1/16/15**	**Sat 5/7/16**
865		Earthworks	230 days	0%	Fri 1/16/15	Sat 3/5/16
866		Sub grade preparation	233 days	0%	Wed 1/21/15	Sat 3/19/16
867		Sub Base	226 days	0%	Fri 1/23/15	Sat 4/2/16
868		Base	243 days	0%	Wed 1/28/15	Sat 4/9/16
869		Asphalt Concrete	254 days	0%	Mon 2/2/15	Sat 4/23/16
870		Other Road Works	247 days	0%	Fri 2/27/15	Sat 5/7/16
871		Bill No. 3 Electromechanical Works	45 days	0%	Sat 3/21/15	Mon 5/4/15
872		Bill No. 4: Provisional Items and	921 days	0%	Wed 12/18/13	Sat 6/25/16
873		Bill No. 5: Operation & Maintenance	25 days	0%	Tue 1/20/15	Mon 2/16/15
874		Bill No. 6: Laboratory Equipment	19 days	0%	Tue 5/5/15	Sat 5/23/15
875		Bill No. 7: Operation and Maintenance	1 day	0%	Sun 5/24/15	Sun 5/24/15
876		Project Handover	1 day	0%	Wed 5/25/16	Wed 5/25/16



Project: STUEIP Work Schedule Rev
Date: Thu 3/5/15

Task		Project Summary		Inactive Summary		Manual Summary		External Milestone	
Split		External Tasks		Manual Task		Start-only		Progress	
Milestone	◆	External Milestone	◆	Duration-only		Finish-only		Deadline	
Summary		Inactive Milestone		Manual Summary Rollup		External Tasks			

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

Photographs of the Month

*Figure 1*Rcc Drain Conctruction work At S9.

Figure 2 Site Clearence For Construction of Drain At S9.

Figure 3 Electric Pole Shifting Work At R2 Road.

Figure 4 Sub base Preparation At R2 Road.

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 December 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					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
			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					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
			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					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
	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:**Febraury,2016**

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 Towns Integrated Urban Environmental Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of JANUARY 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
MR283	10/1/2016	RANI	L4	SHREE		11.90	1500 Nos-5 Nos
MR284	10/1/2016	RANI	L4	SHREE		12.30	1500 Nos-5 Nos
MR285	28/01/2016	RANI	L4	ANAND		12.00	1500 Nos-5 Nos
MR286	28/01/216	RANI	L4	ANAND		13.50	1500 Nos-5 Nos
MR287	28/01/2016	CN2	L2A	ANAND		12.40	1500 Nos-5 Nos
MR288	31/01/2016	B2	BARGACHI	ANAND		13.10	1500 Nos-5 Nos
MR289	31/01/2016	B2	BARGACHI	ANAND		13.20	1500 Nos-5 Nos
					Total	35 Nos Brick Crushed	

Total 10 Nos Brick Crushed

Specification	IS1077,IS2180or NS1/2035	I0%<	> I0N/MM2

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 Urban Environmental Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of JANUARY 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
MR263	1/1/2016	B2L2	0+500to 0+520	HIMAL		10.00	1500 Nos-5 Nos
MR264	1/1/2016	B2L2	0+500to 0+520	AMBEY		10.80	1500 Nos-5 Nos
MR265	1/1/2016	B2L2	0+500to 0+520	AMBEY		10.70	1500 Nos-5 Nos
MR266	1/1/2016	B2L2	0+500to 0+520	AMBEY		10.30	1500 Nos-5 Nos
MR267	1/1/2016	S13	L1F	HIMAL		10.30	1500 Nos-5 Nos
MR268	1/1/2016	S13	L1F	AMBEY		10.10	1500 Nos-5 Nos
MR269	1/1/2016	S13	L1F	AMBEY		10.30	1500 Nos-5 Nos
MR270	3/1/2016	T2 Jatuwa	MAN HOLE NO 225	AMBEY		10.80	1500 Nos-5 Nos
MR271	3/1/2016	T2 Jatuwa	MAN HOLE NO 225	AMBEY		10.60	1500 Nos-5 Nos
MR272	3/1/2016	T2 Jatuwa	MAN HOLE NO 225	AMBEY		10.8	1500 Nos-5 Nos
						Total 50 Nos Brick Crushed	
Specification				**IS1077,IS2180or NS1/2035**	**I0%<**	**> I0N/MM2**	

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 Urban Environmental Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of JANUARY 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
MR273	4/1/2016	S13	L1F	AMBEY		10.10	1500 Nos-5 Nos
MR274	4/1/2016	S13	L1F	AMBEY	Remove from site	9.80 (Failed)	1500 Nos-5 Nos
MR275	4/1/2016	S13	L1F	AMBEY	Remove from site	9.50 (Failed)	1500 Nos-5 Nos
MR276	5/1/2016	R3-T3	Man hole no 256	AMBEY		10.70	1500 Nos-5 Nos
MR277	7/1/2016	S13	L1F	SHREE		10.30	1500 Nos-5 Nos
MR278	7/1/2016	B2L2A	BARGACHI	HIMAL		10.80	1500 Nos-5 Nos
MR279	7/1/2016	B2L2A	BARGACHI	HIMAL	Remove from site	9.50 (failed)	1500 Nos-5 Nos
MR280	7/1/2016	B2L2A	BARGACHI	SHREE		10.80	1500 Nos-5 Nos
MR281	10/1/2016	RANI	L4	ANAND		12.10	1500 Nos-5 Nos
MR282	10/1/2016	RANI	L4	SHREE		11.7	1500 Nos-5 Nos

Total 50 Nos Brick Crushed

Specification	IS1077,IS2180or NS1/2035	I0%<	> I0N/MM2

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

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summery of Concrete Crushed Aggregate 20mm down **For The Month Of JANUARY 2016**

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	T2 Line Man Hole No225 jatuwa	Cr Aggregates	MR96	100	97.34	30.71	4.36						Aggregates
2	T2 Line Man Hole No186 jatuwa	Cr Aggregates	MR97	100	96.99	31.06	3.61	13.04	32.8				Source
3	R3 T3 Line Man Hole No 186	Cr Aggregates	MR98	100	96.37	31.55	4.36						Om shree
4	R27-T3 Line	Cr Aggregates	MR99	100	95.58	32.39	4.62	12.16	32.20				
5	R27-T3 Line	Cr Aggregates	MR100	100	96.51	34.34	3.65						Crusher
6	B1 L2A	Cr Aggregates	MR101	100	96.12	34.75	4.32	12.02	32.04	19.3			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

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 JANUARY 2016**

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	%	%		%		
13	B3-LINE Concrete Work	Cr Aggregates	MR108	100	96.10	32.22	5.28						Aggregates
14	B3-LINE Concrete Work	Cr Aggregates	MR109	100	96.07	33.31	5.47						Source
15	B2-LINE Concrete Work	Cr Aggregates	MR110	100	96.18	32.32	5.45	12.30	33.88	19.9			Om shree
16	B2-LINE Concrete Work	Cr Aggregates	MR111	100	95.95	32.25	5.90						
17	B2-LINE Concrete Work	Cr Aggregates	MR112	100	95.79	30.42	5.12						Crusher
18	S13-L1F Concrete Work	Cr Aggregates	MR113	100	96.08	30.65	5.46	13.25	33.65	20.3			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

Approved by 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 ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summery of Concrete Crushed Aggregate 20mm down **For The Month Of JANUARY 2016**

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	%	%		%		
19	S13-L1F Concrete Work	Cr Aggregates	MR114	100	95.98	32.65	5.95						Aggregates
20	Slab Casting Concrete Work	Cr Aggregates	MR115	100	95.39	32.84	6.09	12.10	32.84	20.4			Source
21	Slab Casting Concrete Work	Cr Aggregates	MR116	100	95.13	32.73	5.58						Om shree
22	Slab Casting Concrete Work	Cr Aggregates	MR117	100	95.34	31.86	5.79						
23	Man Hole Casting Concrete Work	Cr Aggregates	MR118	100	95.56	32.03	6.14	12.64	32.68	20.5			Crusher
24	Man Hole Casting Concrete Work	Cr Aggregates	MR119	100	95.37	32.06	6.48						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

Approved by CSE

Test Checked by Junior Engineer

Consultant Reps

CTCE-KALIKA J/V

Submitted by Project Manager

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Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summery of Concrete Crushed Aggregate 20mm down **For The Month Of JANUARY 2016**

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						
7	B1L2A	Cr Aggregates	MR102	100	96.85	39.83	4.34						Aggregates
8	B1L2A	Cr Aggregates	MR103	100	96.91	39.88	4.22						Source
9	S-5 LINE Concrete WORK	Cr Aggregates	MR104	100	95.04	34.67	5.79	12.38	34.20	20.00			Om shree
10	S-5 LINE Concrete WORK	Cr Aggregates	MR105	100	96.14	36.97	5.86						
11	S-5 LINE Concrete WORK	Cr Aggregates	MR106	100	95.99	33.35	6.34						Crusher
12	B3-LINE Concrete Work	Cr Aggregates	MR107	100	96.00	33.51	6.23	12.29	34.12	20.20			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

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 JANUARY 2016**

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	%	%		%		
25	Man Hole Casting Concrete Work	Cr Aggregates	MR120	100	95.52	31.30	5.29						Aggregates
26	Kerb Stone Casting Concrete work	Cr Aggregates	MR121	100	95.37	31.69	5.34	12.63	34.04	19.6			Source
27	Kerb Stone Casting Concrete work	Cr Aggregates	MR122	100	95.56	32.39	5.83						Om shree
28	Kerb Stone Casting Concrete work	Cr Aggregates	MR123	100	95.58	30.92	5.34						
29	Contractor Yard Stocl Pile	Cr Aggregates	MR124	100	96.01	31.24	5.08	12.53	33.56	20.1			Crusher
30	Contractor Yard Stocl Pile	Cr Aggregates	MR125	100	96.54	32.09	5.67						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

Approved by 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 ENVIRONMENTAL IMPROVEMENT PROJECT

BiratnagarSub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of JANUARY 2016

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
7	MR47	SHIVAM OPC	7/1/2016	36.70	205	360	All Cement Are Nepali BRAND OPC
8	MR48	SHIVAM OPC	10/1/2016	37.10	190	300	
9	MR49	SHIVAM OPC	12/1/2016	37.90	180	285	
10	MR50	SHIVAM OPC	16/01/2016	38.30	170	290	
11	MR51	SHIVAM OPC	20/01/2016	38.10	175	300	
12	MR52	SHIVAM OPC	24/01/2016	38.40	165	290	
Requirements in accordance with BS 12					> 45 Min.	10 Hrs	

SHIVAM OPC CEMENT NEW BAGS 55 Per kg

SMCE-Brisbane-AQUA-BDA	CTCE-KALIKA J/V
Approved by C.S.E	Submitted by Project Manager
Test Checked by Junior Engineer	Test Conducted by Q.C Manager
Consultant Reps	Contractores Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BiratnagarSub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of JANUARY 2016

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
1	MR41	SHIVAM OPC	1/1/2016	36.00	250	370	All Cement Are Nepali BRAND OPC
2	MR42	SHIVAM OPC	2/1/2016	36.60	265	380	
3	MR43	SHIVAM OPC	3/1/2016	36.30	270	375	
4	MR44	SHIVAM OPC	4/1/2016	37.10	240	420	
5	MR45	SHIVAM OPC	5/1/2016	37.70	255	400	
6	MR46	SHIVAM OPC	6/1/2016	36.70	235	365	
Requirements in accordance with BS 12					> 45 Min.	10 Hrs	

SHIVAM OPC CEMENT NEW BAGS 55 Per kg

SMCE-Brisbane-AQUA-BDA	CTCE-KALIKA J/V
Approved by C.S.E	Submitted by Project Manager
Test Checked by Junior Engineer	Test Conducted by Q.C Manager
Consultant Reps	Contractores Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20& M25/20 Work Mix FOR THE MONTH OF JANUARY 2016

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location / Structure	Ratio by VOLUMS				Type of Material		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	318	02/01/216	M20 Work mix	RCC BED SLAB B3	0.50	1	2	3.5	Shivam	Om shree C/plant	16.74	22.37	
2	319	03/01/216	M20 Work mix	B1 SHERA WALL 1+758 to 1+782	0.50	1	2	3.5	Shivam	Om shree C/plant	16.59	22.59	
3	320	4/1/2016	M20 Work mix	B3L2A SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.59	Remain	
4	321	5/1/2016	M20 Work mix	T3-R3/R27-T27	0.50	1	2	3.5	Shivam	Om shree C/plant	16.00		
5	322	6/1/2016	M20 Work mix	B1L2A SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.30		
6	323	6/01/216	M20 Work mix	B3L2A SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.30		
7	324	6/1/2016	M20 Work mix	S13L1F RCC BED	0.50	1	2	3.5	Shivam	Om shree C/plant	15.33		
8	325	7/1/2016	M15 Work mix	PCC BED B1	0.52	1	2	4	Shivam	Om shree C/plant	13.19		
9	326	7/1/2016	M15 Work mix	PCC BED B3	0.52	1	2	4	Shivam	Om shree C/plant	12.89		
10	327	10/1/2016	M20 Work mix	B1 SHERA WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	15.70		
11	328	11/1/2016	M20 Work mix	B2 PCC BED	0.50	1	2	3.5	Shivam	Om shree C/plant	15.78		
12	329	12/1/2016	M20 Work mix	T2 Line PCC BED	0.50	1	2	3.5	Shivam	Om shree C/plant	16.89		
13	330	13/1/2016	M20 Work mix	T2 Line L28 PCC BED	0.50	1	2	3.5	Shivam	Om shree C/plant	15.85		
14	331	13/1/2016	M20 Work mix	National Trading Line	0.50	1	2	3.5	Shivam	Om shree C/plant	16.30		
15	332	14/1/2016	M20 Work mix	National Trading Line	0.50	1	2	3.5	Shivam	Om shree C/plant	15.70		
16	333	14/1/2016	M15 Work mix	T3-L28 PCC BED	0.52	1	2	4	Shivam	Om shree C/plant	14.37		
17	334	14/1/2016	M15 Work mix	B1 PCC BED	0.52	1	2	4	Shivam	Om shree C/plant	12.22		
18	335	19/01/2016	M15 Work mix	S5-1+810 to 1+874 Jatuwa	0.52	1	2	4	Shivam	Om shree C/plant	11.41		
19	336	22/01/2016	M20 Work mix	T2-Line PCC	0.50	1	2	3.5	Shivam	Om shree C/plant	17.70		
20	337	24/01/2016	M20 Work mix	National Trading Line	0.50	1	2	3.5	Shivam	Om shree C/plant	17.85		

Total 64 NOS cube crushed on JANUARY

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

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 ENVIRONENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City **STIUEIP**

MONTHLY Test Result Summary Sheet For The Month of JANUARY 2016

Graded Crushed Stone Base Course (Process Control)

STANDARD SPECIFICATION FOR ROAD AND BRIDGE WORKS SECTION 1200 Table 12.3 Physical Requirement of Graded Crushed Stone Base

Ref. No.	Date Tested	Location/ Chainage	Grading sieve size (mm) (% passing by weight)								FI (%)	LAA (%)	AIV (%)	Lab. OMC (%)	Soaked CBR (%)	Lab. MDD (g/cc)	Remarks
			40	31.5	20	10	4.75	2.36	0.60	0.075							
MR15	5/1/2016	From om shree crusher plant	100	94.6	81.6	53.8	39.6	30.1	15.6	5.7	16.91	29.56	16.00	—	—		
MR16	5/1/2016	From om shree crusher plant	—			—				—		28.40		—		—	
MR17	5/1/2016	From om shree crusher plant	100	96.7	74.2	57.6	48.8	41.4	21.2	5.10	17.71			6.5	98	2.305	
Required Specifacation			100	85-100	62-92	40-70	26-55	21-53	12-28	2-10	≤ 25	≤ 30	≤ 20		≥ 80		

REMARKS:Crushed Stone base Blended grading on 40mm crushed=30%,20mm crushed=20%,10mm crushed=10%,Stone dust=40%(Ratio 3:2:1:4) Achived to Meet Target Grading well

SMEC-Brisbane-AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved by C.S.E	Submit by Project Manager
Test Checked by Junior Engineer	Test Conducted by Q.C Manager
Consultant Reps	Consultant Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summary of Fine Concrete Aggregates Sand FOR THE MONTH OF JANUARY 2016

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Siza Distribution							Sp Gr	Unit Weight gm/cc	REMARKS
			10	4.75	2.36	1.18	0.6	0.3	0.15			
1	T2 Line Man Hole no 225	MR96	100.00	96.29	84.29	60.29	42.29	17.14	4.57			source
2	T3 Line Man Hole no 186	MR97	100.00	96.57	88.29	66.29	39.43	15.71	5.73			om shree
3	R3-T3 Man Hole No186	MR98	100.00	94.86	86.29	63.71	39.43	17.14	6.00			
4	R27-T3	MR99	100.00	91.22	79.05	57.88	39.86	14.41	3.83			
5	R27-T3	MR100	100.00	91.75	79.85	58.25	40.53	14.32	3.64			
6	B1L2A Concrete work	MR101	100.00	91.14	78.86	57.50	39.77	15.23	4.09			crusher
7	B1L2A Concrete work	MR102	100.00	92.42	80.05	64.90	46.46	17.17	4.29			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 Fine Concrete Aggregates Sand FOR THE MONTH OF JANUARY 2016

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Siza Distribution							Sp Gr	Unit Weight gm/cc	REMARKS
			10	4.75	2.36	1.18	0.6	0.3	0.15			
8	B1L2A Concrete work	MR103	100.00	92.14	80.57	66.59	50.22	18.78	6.55			source
9	S-5 Line concrete work	MR104	100.00	91.53	79.06	64.00	46.59	19.53	5.18			om shree
10	S-5 Line concrete work	MR105	100.00	91.25	78.56	64.11	47.48	22.10	5.91			
11	S-5 Line concrete work	MR106	100.00	91.25	78.75	64.17	47.71	23.75	6.88			
12	B2 Line Concrete Work	MR107	100.00	94.40	81.20	66.40	49.20	25.20	6.20			
13	B2 Line Concrete Work	MR108	100.00	95.56	83.23	68.80	49.70	26.26	6.67			crusher
14	B2 Line Concrete Work	MR109	100.00	96.57	81.65	65.93	48.59	25.60	5.04			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 Fine Concrete Aggregates Sand FOR THE MONTH OF JANUARY 2016

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Siza Distribution							Sp Gr	Unit Weight gm/cc	REMARKS
			10	4.75	2.36	1.18	0.6	0.3	0.15			
15	S13-L1F Concrete Work	MR110	100.00	95.13	81.14	64.91	45.84	24.34	5.27			source
16	S13-L1F Concrete Work	MR111	100.00	94.18	79.32	63.45	45.78	25.50	6.22			om shree
17	Slab Casting Yard	MR112	100.00	91.03	78.39	62.3	44.83	22.30	7.82			
18	Slab Casting Yard	MR113	100.00	92.17	78.34	62.44	45.39	21.66	7.37			
19	Slab Casting Yard	MR114	100.00	92.05	77.50	61.59	43.64	19.09	5.68			
20	Slab Casting Yard	MR115	100.00	92.38	77.37	60.74	42.49	17.55	5.54			crusher
21	Man Hole Casting Yard	MR116	100.00	93.93	78.27	62.38	44.39	18.69	6.07			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 Fine Concrete Aggregates Sand FOR THE MONTH OF JANUARY 2016

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Siza Distribution							Sp Gr	Unit Weight gm/cc	REMARKS
			10	4.75	2.36	1.18	0.6	0.3	0.15			
22	Man Hole Casting Yard	MR117	100.00	91.96	76.36	59.10	42.08	17.49	5.44			source
23	Man Hole Casting Yard	MR118	100.00	93.06	78.01	59.95	42.82	18.06	5.09			om shree
24	Kerb Stone Casting Yard	MR119	100.00	94.12	79.64	60.86	45.99	19.91	6.11			
25	Kerb Stone Casting Yard	MR120	100.00	93.78	79.11	59.33	41.56	19.33	6.22			
26	Kerb Stone Casting Yard	MR121	100.00	94.85	80.54	61.97	42.06	17.67	4.92			
27	Contractor Yard Stock	MR122	100.00	94.70	80.72	61.86	41.95	16.74	5.93			crusher
28	Contractor Yard Stock	MR123	100.00	93.54	78.33	61.04	39.79	16.04	5.63			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 Fine Concrete Aggregates Sand FOR THE MONTH OF JANUARY 2016

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Siza Distribution							Sp Gr	Unit Weight gm/cc	REMARKS
			10	4.75	2.36	1.18	0.6	0.3	0.15			
29	Contractor Yard Stock	MR124	100.00	93.20	77.80	60.20	39.40	16.20	6.00			source
30	S9-Concrete Work	MR125	100.00	93.83	78.13	60.56	39.81	16.64	6.36			om shree
31	S9-Concrete Work	MR126	100.00	94.84	79.01	60.59	39.78	16.76	6.45			
32	S9-Concrete Work	MR127	100.00	95.89	79.82	60.54	39.82	16.96	6.61			
33	CN2 Concrete Work	MR128	100.00	95.18	78.49	59.04	38.21	15.32	5.16			
34	CN2 Concrete Work	MR129	100.00	94.51	77.54	58.57	37.60	14.98	5.66			crusher
35	CN2 Concrete Work	MR130	100.00	95.84	78.72	59.68	36.64	15.68	6.24			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

Monthly Laboratory Testing Report

(For The Month OF JANUARY 2016)

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	2	0	0	0		2	
		C.B.R	2	0	0			2	
		Field Density	0	0	0	0		0	
2	SUB GRADE Preparation asPere Specifacation	MDD & OMC	4	1	1	0		5	
		Field density	10	19	19	0		29	
		C.B.R	5	1	1	0		6	
3	BRICK WORK	Water Absorption	185	0	0	0		185	
	Required Test	Compressive Strength	1333	135	135	0		1468	
4	Masonry Mortar (CM 7.05)	Compressive strength	1452	54	54	0		1506	
5	CONCRETE AGGREGATE								
	Coarse aggregate (20 mm)	Sieve analysis (20 mm)	95	36	36	0		131	
		LAA	60	13	13	0		73	
		Specific Gravity	16	0	0	0		16	
		FI / EI	82	14	14	0		96	
		ACV	89	11	11	0		100	
		SSS							
		Unit weight	2	0	0	0		2	
	Fine aggregate (Sand)	Sieve analysis	86	35	35	0		121	
		Sand Equivalent Test(S.E)							
		Unit weight	2	0	0	0		2	
6	CONCRETE MIX DESIGN	Concrete mix Design	75	0	0	0		75	
	ConcreteM15/20,M20/20	Compressive strength	738	0	0	0		738	
	M25/20,&M30/20	Slump test	72	0	0	0		72	
7	CEMENT Required Test								
	OPC Cement	Setting time	40	12	12	0		52	
		Normal Consistency	40	12	12	0		52	
		Compressive strength	38	0	0	0		38	
8	CONCRETE								
	Work Mix Test M15,M20,M25,M30	Compressive strength	2779	115	115	0		2894	
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	5	12	12	0		17	
		MDD & OMC	2	1	1	0		3	

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

Monthly Laboratory Testing Report

(For The Month OF JANUARY 2016)

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	0	0	0	0		0	
		CBR	2	1	1	0		3	
		Field density	0	20	18	2		20	
11	Back Fill Material	Sieve analysis							
		MDD & OMC							
		Field density							
		CBR							
12	CS Base	Sieve analysis	2	2	2	0		4	
	Crushed Stone Base	MDD & OMC	2	1	1	0		3	
	Material Laying	C.B.R	2	1	1	0		3	
		FI + EI	1	1	1	0		2	
		LAA	1	2	2	0		3	
		SSS	0	0	0	0		0	
		ACV/AIV	1	1	1	0		2	
		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 URBAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

Monthly Laboratory Testing Report

(For The Month of JANUARY 2016)

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 afte loss on Heating		0	0			2	
		Solubility in tricloroethylene	2	0	0			2	
15	Humpipe Test	Three Edge Bearing Load Test	2	5	5			7	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							
		Core Field Density							
17	BITUMEN SPREAD TEST								
	Prime coat	Application rate							
	Tack coat	Application rate							
18	Machines/Equipment								
	Caliberation of compressive	1000KN Manuall	2	0	0			2	
	Testing machine	500 KN Manuall	2	0	0			2	
19	MISCELLANEOUS								
	G.I Wire(Gabion Boxes)		5	0	0			5	
	Factory Test Report of Cement		8	0	0			8	
	Factory Test Report of Iron Steel		4	0	0			4	
	Factory Test Report of 80/100 Bitumen		2	0	0			2	
	Factory Test Report of UPVC/HDP Pipe		2	0	0			2	
	UPVC/HDP Pipe Test Result		2	0	0			2	

MDD/OMC = Max Dry Dennsity

Optimum Moisture Content

SSS = Sodium Sulphate Soundness

ACV = Aggregtae Crushing Value

CBR=California Bearing Ratio

LAA = Los Angeles Abrasion

SE=Sand Equivqlent

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

JAY SHREE RAM CONCRETE INDUSTRIES (P)LTD
SUNDARPUR -9 MORANG

REPORT OF PRE -DELIVERY INSPECTION (TEST REPORT)

Name of the Consignee:CTCE-KALIKA J/V STUEIP Project Biratnagar Morang

Name of the Unit:JAY SHREE RAM CONCRETE Industries(P) Ltd sundarpur-9,Morang

Iteam SIZE(MM)-400 DIA

Concrete Pipes,Type- Spigot socket Class -NP3 Standard IS:458:2003-1

Date of Testing: 20-jan-2016 - wed - day.

THREE -EDGE BEARING TEST : IS 458:2003

SN	QTY No	Nature of Test	Requirement	Observation
1	1	Load to Produce0.25mm Crack(Table No:5)	Linear Meter 19.16 KN 4.653 Tone.	Linear Meter 11.0 Tone. NO Crack observed
		Ultimate Load	Load/Pipe ton 28.74 KN	Passed. Confirmed.

REMARKS: Concrete Pipes 28 days Age.

Authorized Signature

JAY SHREE RAM CONCRETE INDUSTRIES (P)LTD
SUNDARPUR -9 MORANG

REPORT OF PRE -DELIVERY INSPECTION (TEST REPORT)

Name of the Consignee:CTCE-KALIKA J/V STUEIP Project Biratnagar Morang

Name of the Unit:JAY SHREE RAM CONCRETE Industries(P) Ltd sundarpur-9,Morang

Iteam SIZE(MM)-700 DIA

Concrete Pipes,Type- Spigot socket Class -NP3 Standard IS:458:2003-1

Date of Testing: 20-jan-2016 - wed-day

THREE -EDGE BEARING TEST : IS 458:2003

SN	QTY No	Nature of Test	Requirement	Observation
1	1	Load to Produce0.25mm Crack(Table No:5)	Linear Meter 33.53 KN / 8.040 Ton	Linear Meter 10.00 Tone. NO Crack observed.
		Ultimate Load	Load/Pipe ton 50.30 KN	passed confirmed.

REMARKS: Concrete pipes 28 days age -

जय श्रीराम कंक्रीट इण्डस्ट्रिज प्रा.लि. सुन्दरपुर-९, मोरङ

Authorized Signature

JAY SHREE RAM CONCRETE INDUSTRIES (P)LTD
SUNDARPUR -9 MORANG
REPORT OF PRE -DELIVERY INSPECTION (TEST REPORT)

Name of the Consignee:CTCE-KALIKA J/V STUEIP Project Biratnagar Morang

Name of the Unit:JAY SHREE RAM CONCRETE Industries(P) Ltd sundarpur-9,Morang

Iteam SIZE(MM)-900 DIA

Concrete Pipes,Type- Spigot socket Class -NP3 Standard IS:458:2003-1

Date of Testing: Jan-20-2016 - Wed-day.

THREE -EDGE BEARING TEST : IS 458:2003

SN	QTY No	Nature of Test	Requirement	Observation
1	1	Load to Produce0.25mm Crack(Table No:5)	Linear Meter 43.11 / KN 10.338 tone	Linear Meter 10.4 Tone
		Ultimate Load	Load/Pipe ton 64.67 KN	Crack observed

REMARKS: Concrete pipes 28 days Age. made For Local market. Not for STUEIP Project

Authorized Signature

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 JANUARY 2016

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	112	2/1/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	21.8	
2	113	3/1/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.4	22.0	
3	114	6/1/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	-	Remain
4	115	8/1/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.5	-	
5	116	12/1/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.4	-	
6	117	18/01/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	18.3	-	
7	119	24/01/2016	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.6	-	
										Total cube crushed 27 nos (Remain 15 nos) next Month			

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 Q.C Manager

Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

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

FOR THE MONTH OF JANUARY 216

Description : Field Density Tests on R2 ch:1+920 to 1+500 LHS/RHS SUB BASE LAYER

S.N.	L/Ref. No.	Date	Location/ Area	MDD Gm/CC	Degree of Compaction, %		Remarks
1	FD-07	31/01/2016	1+880 RHS	2.14	95.30	8.00	Passed
2	FD-07	31/01/2016	1+880 RHS	2.16	96.10	8.10	Passed
3	FD-07	31/01/2016	1+880 LHS	2.14	95.30	8.00	Passed
4	FD-07	31/01/2016	1+735 LHS	2.23	99.00	8.00	Passed
5	FD-07	31/01/2016	1+700 LHS	2.19	97.50	8.40	Passed
6	FD-07	31/01/2016	1+670 RHS	2.18	96.80	7.30	Passed
7	FD-07	31/01/2016	1+610 LHS	2.14	95.10	2.50	Passed
8	FD-07	31/01/2016	1+570 LHS	1.62	72.00	3.70	Failed
9	FD-07	31/01/2016	1+570 RHS Re/Test	2.23	99.20	6.90	R/T Passed
10	FD-07	31/01/2016	1+530 LHS	2.24	99.60	6.40	Passed
11	FD-07	31/01/2016	1+500 LHS	2.11	93.60	2.80	Failed
12	FD-07	31/01/2016	1+500 LHS Re/Test	2.24	99.00	2.24	Passed
Specification Requirement				2.250	>95	OMC <8.40	

SMEC-Brisbane-AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved by C.S.E	Submitted by Project Manager
Test Checked by Junior Engineer	Test Conducted by Q.C Manager
Consultant Reps	Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

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

FOR THE MONTH OF JANUARY 216

Description : Field Density Tests on R2 ch:1+120 to1+700 LHS/RHS

SUB GRADE LAYER

S.N.	L/Ref. No.	Date	Location/ Area	MDD Gm/CC	Degree of Compaction, %		Remarks
1	FD-05	10/1/2016	1+120	2.16	98.70	6.00	Passed
2	FD-05	10/1/2016	1+170	2.09	95.70	7.00	Passed
3	FD-05	10/1/2016	1+220	2.12	96.80	6.00	Passed
4	FD-05	10/1/2016	1+270	2.13	97.40	6.00	Passed
5	FD-05	10/1/2016	1+320	2.18	99.40	6.00	Passed
6	FD-05	11/1/2016	1+370	2.12	96.60	7.00	Passed
7	FD-05	11/1/2016	1+420	2.12	96.80	6.00	Passed
8	FD-05	11/1/2016	1+470	2.12	97.00	6.25	Passed
9	FD-05	11/1/216	1+520	2.12	96.70	7.00	Passed
10	FD-05	11/1/216	1+570	2.13	97.10	5.90	Passed
11	FD-05	11/1/2016	1+650	2.18	99.70	5.20	Passed
12	FD-05	11/1/2016	1+700	2.12	96.60	6.82	Passed
Specification Requirement				2.190	>95	OMC <7.5%	

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

Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

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

FOR THE MONTH OF JANUARY 216

Description : Field Density Tests on R2 ch:1+120 to 1+400 LHS/RHS

SUB BASE LAYER

S.N.	L/Ref. No.	Date	Location/ Area	MDD Gm/CC	Degree of Compaction, %		Remarks
1	FD-06	18/01/2016	1+130	2.21	98.20	8.00	Passed
2	FD-06	18/01/2016	1+150	2.23	99.30	7.20	Passed
3	FD-06	18/01/2016	1+180	2.22	98.40	8.00	Passed
4	FD-06	18/01/2016	1+210	2.24	99.60	6.90	Passed
5	FD-06	18/01/2016	1+260	2.24	99.60	7.30	Passed
6	FD-06	18/01/2016	1+370	2.25	99.90	8.10	Passed
7	FD-06	18/01/2016	1+380	2.18	96.90	8.00	Passed
8	FD-06	18/01/2016	1+400	2.21	98.20	7.30	Passed
Specification Requirement				2.250	>95	OMC <8.40	

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

Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City **STIUEIP**

MONTHLY Test Result Summary Sheet For The Month of JANUARY 2016

GRAVEL MATERIAL/SUB BASE (Process Control)

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

Ref. No.	Date Tested	Location/ Chainage/Station	Grading sieve size (mm) (% passing by weight)								Lab. OMC (%)	Soaked CBR (%)	Lab. MDD (g/cc)	Remarks
			63	37.5	20	10	5	2.360	1.18	0.075				
MR18	3/1/2016	T2 Line Jatuwa	100	94.00	68.82	47.97	35.54	30.53	22.69	4.61				
MR19	3/1/2016	OM SHREE RUSHER PLANT LETANG	100	94.40	72.73	57.01	42.05	37.96	29.43	4.38				
MR20	3/1/2016	OM SHREE RUSHER PLANT LETANG	100	94.84	75.20	59.51	40.85	35.37	29.84	4.02				
MR21	3/1/2016	OM SHREE RUSHER PLANT LETANG	100	94.64	73.52	58.10	39.87	34.22	29.82	4.23	8.40	46.00	2.25	Latest MDD &OMC,C.B.R Test
MR22	3/1/2016	T3 Line -R27 Line	100	92.65	67.71	57.57	48.28	37.84	24.66	6.29				
MR23	3/1/216	R3-T3 Line	100	92.50	68.13	58.50	48.53	38.11	24.27	6.77				
MR24	18/01/216	R2 Ch:1+120 to 1+400 LHS/RHS	100	91.60	64.13	54.31	45.31	37.45	23.17	6.02				
MR25	18/01/216	R2 Ch:1+120 to 1+400 LHS/RHS	100	90.89	64.35	54.22	44.24	36.65	22.39	6.54				
MR26	18/01/216	R2 Ch:1+120 to 1+400 LHS/RHS Pit Holes	100	89.99	64.94	55.74	47.18	36.60	22.25	5.74				Field Density Test (FDT)
MR27	31/01/2016	R2 Ch 1+400 to 1+920 LHS/RHS Pit Holes	100	89.94	66.49	56.77	47.90	36.72	22.29	5.78				Field Density Test (FDT)
MR28	31/01/2016	R2 Ch 1+400 to 1+920 LHS/RHS Pit Holes	100	89.66	65.89	56.36	48.82	37.58	23.16	6.41				Field Density Test (FDT)
MR29	31/01/2016	R2 ch 1+400 to 1+920 LHS/RHS	100	91.26	66.50	57.16	48.73	37.94	22.49	6.23				From Laying Works
Required Specifacation			100	65-95	50-85	40-75	30-60	20-45	15-37	4-15		≥ 30		

NOTE:

SMEC-Brisbane-AQUA-CEMAT-BDA	**CTCE-KALIKA J/V**
Approved by C.S.E	**Submit by Project Manager**
Test Checked by Junior Engineer	**Test Conducted by Q.C Manager**
Consultant Reps	**Consultant Reps**