

## **D: Transportation Sector**



## Appendix D-1 Traffic Survey in PCU

Vehicle classification applied to traffic survey was the following three (3) classes:

- H : Heavy Vehicle: Bus, Truck, Trailer, and Special Vehicle
- L : Light Vehicle: Tuk-Tuk, Sedan, Mini Bus, Pick-Up, and Motor trailer
- M : Motorcycle

The number of PCU (Passenger Car Unit) was derived by the following Passenger-car equivalents:

Vehicle Class	Passenger-car Equivalents
Heavy Vehicle	2.5
Light Vehicle	1.0
Motorcycle	0.3

Source: Page III-6-13, Volume III Sector Report, the Master Plan

### Traffic Count Survey 2010

16/01/2010 Saturday

Time	No. 4-1 West to East						PCU/h	No. 4-2 East to West						PCU/h	
	Accumulated			per 30 minutes				Accumulated			per 30 minutes				
	H	L	M	H	L	M		H	L	M	H	L	M		
6:00 - 6:30	3	36	176	3	36	176		4	63	246	4	63	246		
6:30 - 7:00	7	94	637	4	58	461	302	12	148	465	8	85	219	318	
7:00 - 7:30	16	183	1,045	9	89	408		29	243	681	17	95	216		
7:30 - 8:00	27	299	1,355	11	116	310	471	43	373	900	14	130	219	433	
8:00 - 8:30	34	412	1,552	7	113	197		71	506	1,065	28	133	165		
8:30 - 9:00	47	521	1,770	13	109	218	397	104	656	1,301	33	150	236	556	
9:00 - 9:30	56	613	1,940	9	92	170		121	764	1,542	17	108	241		
9:30 - 10:00	68	706	2,108	12	93	168	339	138	868	1,757	17	104	215	434	
10:00 - 10:30	75	788	2,247	7	82	139		155	1,025	2,040	17	157	283		
10:30 - 11:00	88	876	2,433	13	88	186	317	162	1,085	2,127	7	60	87	388	
11:00 - 11:30	99	974	2,610	11	98	177		177	1,213	2,310	15	128	183		
11:30 - 12:00	119	1,075	2,779	20	101	169	381	187	1,340	2,477	10	127	167	422	
12:00 - 12:30	138	1,153	2,985	19	78	206		197	1,461	2,650	10	121	173		
12:30 - 13:00	152	1,295	3,166	14	142	181	418	208	1,574	2,829	11	113	179	392	
13:00 - 13:30	165	1,396	3,344	13	101	178		224	1,681	3,004	16	107	175		
13:30 - 14:00	174	1,504	3,582	9	108	238	389	236	1,807	3,182	12	126	178	409	
14:00 - 14:30	192	1,596	3,840	18	92	258		253	1,933	3,447	17	126	265		
14:30 - 15:00	215	1,732	4,091	23	136	251	483	273	2,046	3,678	20	113	231	480	
15:00 - 15:30	237	1,884	4,281	22	152	190		289	2,202	3,919	16	156	241		
15:30 - 16:00	245	1,988	4,476	8	104	195	447	316	2,323	4,114	27	121	195	515	
16:00 - 16:30	275	2,131	4,675	30	143	199		344	2,408	4,378	28	85	264		
16:30 - 17:00	293	2,245	4,963	18	114	288	523	363	2,493	4,637	19	85	259	444	
17:00 - 17:30	312	2,355	5,111	19	110	148		369	2,551	4,884	6	58	247		
17:30 - 18:00	338	2,470	5,383	26	115	272	464	381	2,646	5,182	12	95	298	361	
18:00 - 18:30	351	2,561	5,589	13	91	206		399	2,723	5,464	18	77	282		
18:30 - 19:00	363	2,652	5,760	12	91	171	357	406	2,811	5,706	7	88	242	385	
19:00 - 19:30	380	2,732	5,892	17	80	132		423	2,863	5,837	17	52	131		
19:30 - 20:00	394	2,780	5,927	14	48	35	256	439	2,901	5,923	16	38	86	238	
Total PCUs from 6:00~20:00							5,544								5,775

19/01/2010 Tuesday

No. 4-1 West to East

Time	Accumulated			per 30 minutes			PCU/h
	H	L	M	H	L	M	
6:00 - 6:30	6	50	186	6	50	186	
6:30 - 7:00	20	147	745	14	97	559	421
7:00 - 7:30	30	223	1,143	10	76	398	
7:30 - 8:00	45	360	1,550	15	137	407	517
8:00 - 8:30	59	484	1,761	14	124	211	
8:30 - 9:00	64	564	1,918	5	80	157	362
9:00 - 9:30	86	634	2,116	22	70	198	
9:30 - 10:00	100	761	2,322	14	127	206	408
10:00 - 10:30	108	878	2,480	8	117	158	
10:30 - 11:00	117	1,010	2,655	9	132	175	391
11:00 - 11:30	141	1,122	2,877	24	112	222	
11:30 - 12:00	153	1,240	3,033	12	118	156	434
12:00 - 12:30	168	1,354	3,176	15	114	143	
12:30 - 13:00	182	1,456	3,367	14	102	191	388
13:00 - 13:30	193	1,576	3,590	11	120	223	
13:30 - 14:00	198	1,669	3,782	5	93	192	377
14:00 - 14:30	217	1,791	4,018	19	122	236	
14:30 - 15:00	231	1,874	4,209	14	83	191	415
15:00 - 15:30	252	1,974	4,380	21	100	171	
15:30 - 16:00	264	2,092	4,582	12	118	202	413
16:00 - 16:30	290	2,227	4,849	26	135	267	
16:30 - 17:00	311	2,341	5,132	21	114	283	531
17:00 - 17:30	337	2,458	5,481	26	117	349	
17:30 - 18:00	357	2,567	5,730	20	109	249	521
18:00 - 18:30	376	2,699	5,947	19	132	217	
18:30 - 19:00	388	2,791	6,123	12	92	176	420
19:00 - 19:30	420	2,880	6,261	32	89	138	
19:30 - 20:00	429	2,925	6,339	9	45	78	301
Total PCUs from 6:00~20:00							5,899

No. 4-2 East to West

Time	Accumulated			per 30 minutes			PCU/h
	H	L	M	H	L	M	
6:00 - 6:30	7	55	150	7	55	150	
6:30 - 7:00	17	172	464	10	117	314	354
7:00 - 7:30	29	292	738	12	120	274	
7:30 - 8:00	76	529	1,184	47	237	446	720
8:00 - 8:30	98	645	1,395	22	116	211	
8:30 - 9:00	119	764	1,566	21	119	171	457
9:00 - 9:30	138	897	1,769	19	133	203	
9:30 - 10:00	152	993	1,968	14	96	199	432
10:00 - 10:30	160	1,088	2,161	8	95	193	
10:30 - 11:00	171	1,210	2,419	11	122	258	400
11:00 - 11:30	194	1,337	2,652	23	127	233	
11:30 - 12:00	212	1,427	2,852	18	90	200	449
12:00 - 12:30	226	1,582	2,989	14	155	137	
12:30 - 13:00	243	1,679	3,183	17	97	194	429
13:00 - 13:30	266	1,782	3,377	23	103	194	
13:30 - 14:00	281	1,865	3,511	15	83	134	380
14:00 - 14:30	300	2,006	3,773	19	141	262	
14:30 - 15:00	317	2,125	4,005	17	119	232	498
15:00 - 15:30	337	2,286	4,247	20	161	242	
15:30 - 16:00	379	2,476	4,504	42	190	257	656
16:00 - 16:30	397	2,552	4,756	18	76	252	
16:30 - 17:00	429	2,660	5,057	32	108	301	475
17:00 - 17:30	444	2,747	5,339	15	87	482	
17:30 - 18:00	461	2,835	5,816	17	88	277	483
18:00 - 18:30	472	2,905	6,057	11	70	241	
18:30 - 19:00	486	2,970	6,270	14	65	213	334
19:00 - 19:30	515	3,019	6,415	29	49	145	
19:30 - 20:00	522	3,048	6,513	7	29	98	241
Total PCUs from 6:00~20:00							6,308

16/01/2010 Saturday

No. 5-1 West to East

Time	Accumulated			per 30 minutes			PCU/h
	H	L	M	H	L	M	
6:00 - 6:30	7	62	233	7	62	233	
6:30 - 7:00	27	163	638	20	101	405	422
7:00 - 7:30	48	315	1,268	21	152	630	
7:30 - 8:00	63	502	1,857	15	187	589	795
8:00 - 8:30	83	717	2,479	20	215	622	
8:30 - 9:00	110	940	3,010	27	223	531	902
9:00 - 9:30	127	1,149	3,583	17	209	573	
9:30 - 10:00	142	1,347	4,187	15	198	604	840
10:00 - 10:30	151	1,544	4,836	9	197	649	
10:30 - 11:00	157	1,734	5,477	6	190	641	811
11:00 - 11:30	166	2,009	6,316	9	275	839	
11:30 - 12:00	174	2,153	6,748	8	144	432	843
12:00 - 12:30	197	2,355	7,411	23	202	663	
12:30 - 13:00	214	2,561	7,964	17	206	553	872
13:00 - 13:30	230	2,777	8,519	16	216	555	
13:30 - 14:00	248	3,029	9,169	18	252	650	915
14:00 - 14:30	261	3,201	9,684	13	172	515	
14:30 - 15:00	278	3,363	10,267	17	162	583	738
15:00 - 15:30	290	3,524	10,798	12	161	531	
15:30 - 16:00	298	3,668	11,355	8	144	557	681
16:00 - 16:30	306	3,809	11,866	8	141	511	
16:30 - 17:00	315	3,954	12,446	9	145	580	656
17:00 - 17:30	329	4,199	13,359	14	245	913	
17:30 - 18:00	344	4,466	14,119	15	267	760	1,087
18:00 - 18:30	359	4,887	14,844	15	421	725	
18:30 - 19:00	374	5,040	15,467	15	153	623	1,053
19:00 - 19:30	385	5,179	15,890	11	139	423	
19:30 - 20:00	399	5,179	16,287	14	0	397	447
Total PCUs from 6:00~20:00							11,062

No. 5-2 East to West

Time	Accumulated			per 30 minutes			PCU/h
	H	L	M	H	L	M	
6:00 - 6:30	9	58	334	9	58	334	
6:30 - 7:00	29	184	997	20	126	663	556
7:00 - 7:30	34	339	1,919	5	155	922	
7:30 - 8:00	49	512	2,648	15	173	729	873
8:00 - 8:30	61	703	3,259	12	191	611	
8:30 - 9:00	79	869	3,830	18	166	571	786
9:00 - 9:30	88	1,023	4,328	9	154	498	
9:30 - 10:00	104	1,234	4,871	16	211	543	740
10:00 - 10:30	121	1,455	5,399	17	221	528	
10:30 - 11:00	124	1,663	5,847	3	208	448	772
11:00 - 11:30	146	1,874	6,442	22	211	595	
11:30 - 12:00	165	2,033	6,844	19	159	402	772
12:00 - 12:30	185	2,221	7,345	20	188	501	
12:30 - 13:00	204	2,374	7,860	19	153	515	743
13:00 - 13:30	218	2,518	8,313	14	144	453	
13:30 - 14:00	238	2,716	8,869	20	198	556	730
14:00 - 14:30	249	2,878	9,341	11	162	472	
14:30 - 15:00	258	3,075	9,946	9	197	605	732
15:00 - 15:30	270	3,249	10,528	12	174	582	
15:30 - 16:00	288	3,402	10,993	18	153	465	717
16:00 - 16:30	303	3,573	11,463	15	171	470	
16:30 - 17:00	316	3,776	11,992	13	203	529	744
17:00 - 17:30	327	3,968	12,612	11	192	620	
17:30 - 18:00	345	4,170	13,278	18	202	666	853
18:00 - 18:30	358	4,405	13,955	13	235	677	
18:30 - 19:00	373	4,641	14,602	15	236	647	939
19:00 - 19:30	380	4,780	15,034	7	139	432	
19:30 - 20:00	393	4,887	15,419	13	107	385	541
Total PCUs from 6:00~20:00							10,498

19/01/2010 Tuesday

Time	No. 5-1 West to East						PCU/h
	Accumulated			per 30 minutes			
	H	L	M	H	L	M	
6:00 - 6:30	15	68	259	15	68	259	
6:30 - 7:00	29	176	712	14	108	453	462
7:00 - 7:30	47	353	1,350	18	177	638	
7:30 - 8:00	64	546	2,017	17	193	667	849
8:00 - 8:30	89	765	2,615	25	219	598	
8:30 - 9:00	109	983	3,203	20	218	588	905
9:00 - 9:30	121	1191	3,794	12	208	591	
9:30 - 10:00	138	1393	4,395	17	202	601	840
10:00 - 10:30	157	1666	5,059	19	273	664	
10:30 - 11:00	172	1,949	5,777	15	283	718	1,056
11:00 - 11:30	191	2,189	6,499	19	240	722	
11:30 - 12:00	209	2,377	7,170	18	188	671	938
12:00 - 12:30	219	2,529	7,659	10	152	489	
12:30 - 13:00	242	2,759	8,227	23	230	568	782
13:00 - 13:30	263	2,987	8,777	21	228	550	
13:30 - 14:00	279	3,167	9,177	16	180	400	786
14:00 - 14:30	293	3,356	9,746	14	189	569	
14:30 - 15:00	305	3,541	10,279	12	185	533	770
15:00 - 15:30	320	3,711	10,800	15	170	521	
15:30 - 16:00	328	3,871	11,352	8	160	552	710
16:00 - 16:30	336	4,016	11,900	8	145	548	
16:30 - 17:00	343	4,193	12,524	7	177	624	711
17:00 - 17:30	367	4,429	13,589	24	236	1,065	
17:30 - 18:00	379	4,652	14,378	12	223	789	1,106
18:00 - 18:30	395	4,859	15,187	16	207	809	
18:30 - 19:00	409	5,033	15,799	14	174	612	883
19:00 - 19:30	419	5,217	16,399	10	184	600	
19:30 - 20:00	431	5,339	16,757	12	122	358	648
Total PCUs from 6:00~20:00							11,446

No. 5-2 East to West

Time	No. 5-2 East to West						PCU/h
	Accumulated			per 30 minutes			
	H	L	M	H	L	M	
6:00 - 6:30	15	98	365	15	98	365	
6:30 - 7:00	22	228	1,025	7	130	660	591
7:00 - 7:30	37	390	1,879	15	162	854	
7:30 - 8:00	49	592	2,660	12	202	781	922
8:00 - 8:30	66	780	3,241	17	188	581	
8:30 - 9:00	81	948	3,798	15	168	557	778
9:00 - 9:30	96	1,149	4,349	15	201	551	
9:30 - 10:00	116	1,336	4,879	20	187	530	800
10:00 - 10:30	128	1,524	5,448	12	188	569	
10:30 - 11:00	150	1,685	5,990	22	161	542	768
11:00 - 11:30	175	1,905	6,570	25	220	580	
11:30 - 12:00	190	2,062	7,007	15	157	437	783
12:00 - 12:30	212	2,226	7,369	22	164	362	
12:30 - 13:00	227	2,416	7,887	15	190	518	711
13:00 - 13:30	247	2,606	8,362	20	190	475	
13:30 - 14:00	260	2,775	8,744	13	169	382	699
14:00 - 14:30	272	3,005	9,313	12	230	569	
14:30 - 15:00	281	3,223	9,858	9	218	545	835
15:00 - 15:30	297	3,428	10,324	16	205	466	
15:30 - 16:00	313	3,594	10,847	16	166	523	748
16:00 - 16:30	325	3,790	11,392	12	196	545	
16:30 - 17:00	345	3,998	12,078	20	208	686	854
17:00 - 17:30	356	4,186	12,758	11	188	680	
17:30 - 18:00	375	4,366	13,311	19	180	553	813
18:00 - 18:30	383	4,556	13,866	8	190	555	
18:30 - 19:00	395	4,677	14,299	12	121	433	658
19:00 - 19:30	401	4,790	14,565	6	113	266	
19:30 - 20:00	420	4,877	14,799	19	87	234	413
Total PCUs from 6:00~20:00							10,373

16/01/2010 Saturday

Time	No. 1 West to East						PCU/h
	Accumulated			per 30 minutes			
	H	L	M	H	L	M	
6:00 - 6:30	5	58	217	5	58	217	
6:30 - 7:00	16	144	645	11	86	428	378
7:00 - 7:30	28	297	1,135	12	153	490	
7:30 - 8:00	56	492	1,657	28	195	522	752
8:00 - 8:30	87	689	2,003	31	197	346	
8:30 - 9:00	106	928	2,386	19	239	383	779
9:00 - 9:30	114	1,129	2,729	8	201	343	
9:30 - 10:00	119	1,310	3,056	5	181	327	616
10:00 - 10:30	124	1,483	3,382	5	173	326	
10:30 - 11:00	132	1,633	3,720	8	150	338	554
11:00 - 11:30	138	1,783	4,066	6	150	346	
11:30 - 12:00	150	1,940	4,347	12	157	281	540
12:00 - 12:30	157	2,065	4,685	7	125	338	
12:30 - 13:00	168	2,220	5,060	11	155	375	539
13:00 - 13:30	180	2,390	5,384	12	170	324	
13:30 - 14:00	187	2,545	5,726	7	155	342	572
14:00 - 14:30	198	2,719	6,161	11	174	435	
14:30 - 15:00	211	2,923	6,505	13	204	344	672
15:00 - 15:30	227	3,104	6,894	16	181	389	
15:30 - 16:00	238	3,259	7,211	11	155	317	616
16:00 - 16:30	248	3,480	7,634	10	221	423	
16:30 - 17:00	250	3,597	7,916	2	117	282	580
17:00 - 17:30	260	3,768	8,401	10	171	485	
17:30 - 18:00	268	3,984	8,892	8	216	491	725
18:00 - 18:30	270	4,181	9,381	2	197	489	
18:30 - 19:00	283	4,410	9,801	13	229	420	737
19:00 - 19:30	298	4,581	10,133	15	171	332	
19:30 - 20:00	312	4,751	10,452	14	170	319	609
Total PCUs from 6:00~20:00							8,669

No. 1 East to West

Time	No. 1 East to West						PCU/h
	Accumulated			per 30 minutes			
	H	L	M	H	L	M	
6:00 - 6:30	2	65	227	2	65	227	
6:30 - 7:00	5	161	536	3	96	309	334
7:00 - 7:30	24	306	1,080	19	145	544	
7:30 - 8:00	30	526	1,573	6	220	493	739
8:00 - 8:30	38	758	2,065	8	232	492	
8:30 - 9:00	44	944	2,601	6	186	536	762
9:00 - 9:30	50	1,137	3,060	6	193	459	
9:30 - 10:00	54	1,299	3,456	4	162	396	637
10:00 - 10:30	58	1,463	3,897	4	164	441	
10:30 - 11:00	66	1,644	4,501	8	181	604	688
11:00 - 11:30	81	1,835	4,970	15	191	469	
11:30 - 12:00	95	2,042	5,371	14	207	401	731
12:00 - 12:30	121	2,197	5,742	26	155	371	
12:30 - 13:00	146	2,354	6,118	25	157	376	663
13:00 - 13:30	164	2,529	6,422	18	175	304	
13:30 - 14:00	175	2,676	6,791	11	147	369	596
14:00 - 14:30	190	2,851	7,187	15	175	396	
14:30 - 15:00	194	3,053	7,779	4	202	592	721
15:00 - 15:30	205	3,257	8,186	11	204	407	
15:30 - 16:00	210	3,450	8,589	5	193	403	680
16:00 - 16:30	224	3,665	9,234	14	215	645	
16:30 - 17:00	238	3,843	9,619	14	178	385	773
17:00 - 17:30	248	4,073	10,219	10	230	600	
17:30 - 18:00	271	4,264	10,834	23	191	615	868
18:00 - 18:30	307	4,496	11,405	36	232	571	
18:30 - 19:00	323	4,734	11,935	16	238	530	930
19:00 - 19:30	343	4,926	12,462	20	192	527	
19:30 - 20:00	351	5,075	12,768	8	149	306	661
Total PCUs from 6:00~20:00							9,783

19/01/2010 Tuesday

No. 1 West to East

Time	Accumulated			per 30 minutes			PCU/h
	H	L	M	H	L	M	
6:00 - 6:30	7	70	309	7	70	309	
6:30 - 7:00	16	164	726	9	94	417	422
7:00 - 7:30	34	304	1,270	18	140	544	
7:30 - 8:00	54	519	1,774	20	215	504	764
8:00 - 8:30	86	766	2,220	32	247	446	
8:30 - 9:00	104	957	2,528	18	191	308	789
9:00 - 9:30	112	1,170	3,024	8	213	496	
9:30 - 10:00	117	1,317	3,337	5	147	313	635
10:00 - 10:30	122	1,480	3,681	5	163	344	
10:30 - 11:00	130	1,685	4,080	8	205	399	624
11:00 - 11:30	137	1,855	4,444	7	170	364	
11:30 - 12:00	145	2,024	4,784	8	169	340	588
12:00 - 12:30	150	2,208	5,094	5	184	310	
12:30 - 13:00	165	2,371	5,465	15	163	371	602
13:00 - 13:30	180	2,614	5,862	15	243	397	
13:30 - 14:00	194	2,790	6,269	14	176	407	733
14:00 - 14:30	202	3,034	6,735	8	244	466	
14:30 - 15:00	215	3,212	7,119	13	178	384	730
15:00 - 15:30	230	3,400	7,512	15	188	393	
15:30 - 16:00	234	3,590	7,892	4	190	380	657
16:00 - 16:30	241	3,815	8,357	7	225	465	
16:30 - 17:00	248	3,963	8,731	7	148	374	660
17:00 - 17:30	257	4,149	9,327	9	186	596	
17:30 - 18:00	264	4,341	9,859	7	192	532	756
18:00 - 18:30	273	4,494	10,298	9	153	439	
18:30 - 19:00	282	4,726	10,773	9	232	475	704
19:00 - 19:30	295	4,889	11,120	13	163	347	
19:30 - 20:00	311	5,029	11,391	16	140	271	561
Total PCUs from 6:00~20:00							9,225

No. 1 East to West

Time	Accumulated			per 30 minutes			PCU/h
	H	L	M	H	L	M	
6:00 - 6:30	3	59	205	3	59	205	
6:30 - 7:00	13	198	556	10	139	351	397
7:00 - 7:30	23	415	1,236	10	217	680	
7:30 - 8:00	29	652	1,830	6	237	594	876
8:00 - 8:30	41	862	2,347	12	210	517	
8:30 - 9:00	45	1,074	2,800	4	212	453	753
9:00 - 9:30	49	1,251	3,278	4	177	478	
9:30 - 10:00	59	1,409	3,693	10	158	415	638
10:00 - 10:30	63	1,600	4,409	4	191	716	
10:30 - 11:00	66	1,765	4,794	3	165	385	704
11:00 - 11:30	84	1,993	5,353	18	228	559	
11:30 - 12:00	115	2,192	5,760	31	199	407	840
12:00 - 12:30	144	2,347	6,148	29	155	388	
12:30 - 13:00	168	2,535	6,533	24	188	385	708
13:00 - 13:30	185	2,743	6,920	17	208	387	
13:30 - 14:00	195	2,935	7,294	10	192	374	696
14:00 - 14:30	204	3,116	7,976	9	181	682	
14:30 - 15:00	215	3,338	8,414	11	222	438	789
15:00 - 15:30	228	3,544	8,854	13	206	440	
15:30 - 16:00	240	3,793	9,512	12	249	658	847
16:00 - 16:30	255	3,992	9,985	15	199	473	
16:30 - 17:00	268	4,193	10,432	13	201	447	746
17:00 - 17:30	281	4,414	11,255	13	221	823	
17:30 - 18:00	302	4,639	11,837	21	225	582	952
18:00 - 18:30	335	4,885	12,427	33	246	590	
18:30 - 19:00	359	5,077	12,838	24	192	411	881
19:00 - 19:30	382	5,281	13,256	23	204	418	
19:30 - 20:00	392	5,431	13,589	10	150	333	662
Total PCUs from 6:00~20:00							10,489

16/01/2010 Saturday

No. 12 East to East

Time	Accumulated			per 30 minutes			PCU/h
	H	L	M	H	L	M	
6:00 - 6:30	0	131	592	0	131	592	
6:30 - 7:00	3	269	1,146	3	138	554	621
7:00 - 7:30	17	557	2,220	14	288	1,074	
7:30 - 8:00	22	898	3,139	5	341	919	1,274
8:00 - 8:30	31	1,263	3,900	9	365	761	
8:30 - 9:00	43	1,580	4,621	12	317	721	1,179
9:00 - 9:30	50	1,799	5,630	7	219	1,009	
9:30 - 10:00	53	2,179	6,069	3	380	439	1,058
10:00 - 10:30	59	2,548	7,106	6	369	1,037	
10:30 - 11:00	62	2,844	7,840	3	296	734	1,219
11:00 - 11:30	65	3,088	8,518	3	244	678	
11:30 - 12:00	75	3,300	9,111	10	212	593	870
12:00 - 12:30	84	3,572	9,834	9	272	723	
12:30 - 13:00	96	3,771	10,406	12	199	572	912
13:00 - 13:30	115	4,043	11,053	19	272	647	
13:30 - 14:00	131	4,252	11,718	16	209	665	963
14:00 - 14:30	148	4,458	12,322	17	206	604	
14:30 - 15:00	158	4,773	13,095	10	315	773	1,002
15:00 - 15:30	165	5,097	13,804	7	324	709	
15:30 - 16:00	170	5,395	14,638	5	298	834	1,115
16:00 - 16:30	175	5,636	15,266	5	241	628	
16:30 - 17:00	184	5,902	16,034	9	266	768	961
17:00 - 17:30	188	6,191	16,923	4	289	889	
17:30 - 18:00	206	6,517	17,864	18	326	941	1,219
18:00 - 18:30	215	6,879	18,726	9	362	862	
18:30 - 19:00	225	7,150	19,394	10	271	668	1,139
19:00 - 19:30	239	7,407	20,007	14	257	613	
19:30 - 20:00	251	7,705	20,633	12	298	626	992
Total PCUs from 6:00~20:00							14,524

19/01/2010 Tuesday

No. 12 East to West

Time	Accumulated			per 30 minutes			PCU/h
	H	L	M	H	L	M	
6:00 - 6:30	6	109	520	6	109	520	
6:30 - 7:00	14	282	1,334	8	173	814	717
7:00 - 7:30	20	547	2,471	6	265	1,137	
7:30 - 8:00	38	1,000	3,770	18	453	1,299	1,509
8:00 - 8:30	49	1,365	4,526	11	365	756	
8:30 - 9:00	54	1,788	5,478	5	423	952	1,340
9:00 - 9:30	55	2,083	6,199	1	295	721	
9:30 - 10:00	60	2,393	7,024	5	310	825	1,084
10:00 - 10:30	65	2,708	7,935	5	315	911	
10:30 - 11:00	68	2,971	8,637	3	263	702	1,082
11:00 - 11:30	77	3,291	9,613	9	320	976	
11:30 - 12:00	81	3,492	10,189	4	201	576	1,019
12:00 - 12:30	95	3,819	11,189	14	327	1,000	
12:30 - 13:00	110	4,033	11,874	15	214	685	1,119
13:00 - 13:30	120	4,291	12,628	10	258	754	
13:30 - 14:00	132	4,646	13,587	12	355	959	1,182
14:00 - 14:30	146	4,943	14,379	14	297	792	
14:30 - 15:00	160	5,364	14,968	14	421	589	1,203
15:00 - 15:30	168	5,607	15,908	8	243	940	
15:30 - 16:00	180	5,985	16,840	12	378	932	1,233
16:00 - 16:30	190	6,248	17,519	10	263	679	
16:30 - 17:00	195	6,561	18,368	5	313	849	1,072
17:00 - 17:30	204	6,833	19,366	9	272	998	
17:30 - 18:00	215	7,124	20,320	11	291	954	1,199
18:00 - 18:30	224	7,424	21,214	9	300	894	
18:30 - 19:00	242	7,769	21,999	18	345	785	1,217
19:00 - 19:30	249	7,999	22,502	7	230	503	
19:30 - 20:00	263	8,230	23,071	14	231	569	835
Total PCUs from 6:00~20:00							15,811

Traffic Count Survey 2004 by the Master Plan

12/12/2004 Sunday

Time	No. 1 West to East				No. 1 East to West			
	H	L	M	PCU/h	H	L	M	PCU/h
5:00 - 6:00	43	64	235	242	7	36	210	117
6:00 - 7:00	76	128	707	530	43	155	530	422
7:00 - 8:00	134	254	1,362	998	130	426	829	1,000
8:00 - 9:00	156	330	1,080	1,044	74	471	1,264	1,035
9:00 - 10:00	95	288	871	787	44	381	1,400	911
10:00 - 11:00	71	228	804	647	29	191	918	539
11:00 - 12:00	35	218	788	542	33	252	770	566
12:00 - 13:00	66	224	729	608	67	238	727	624
13:00 - 14:00	120	271	774	803	98	411	769	887
14:00 - 15:00	76	221	698	620	64	376	1,003	837
15:00 - 16:00	110	198	688	679	39	430	1,004	829
16:00 - 17:00	84	186	910	669	43	481	1,213	952
17:00 - 18:00	107	312	1,229	948	57	272	1,181	769
18:00 - 19:00	122	353	858	915	203	722	1,579	1,703
19:00 - 20:00	104	334	784	829	41	383	879	749
20:00 - 21:00	50	250	636	566	31	402	769	710
Total	1,356	3,545	12,282	10,619	965	5,189	14,066	11,823

Note: Total numbers represent the summation from 6:00 to 20:00

13/12/2004 Monday

Time	No. 1 West to East				No. 1 East to West			
	H	L	M	PCU/h	H	L	M	PCU/h
5:00 - 6:00	26	22	195	146	3	26	171	85
6:00 - 7:00	37	70	703	373	30	307	803	623
7:00 - 8:00	131	298	1,488	1,072	60	389	1,238	910
8:00 - 9:00	142	323	1,108	1,010	41	690	1,363	1,201
9:00 - 10:00	137	361	990	1,001	21	409	1,146	805
10:00 - 11:00	94	240	798	714	20	567	975	910
11:00 - 12:00	89	439	925	939	72	335	1,073	837
12:00 - 13:00	72	241	672	623	92	358	738	809
13:00 - 14:00	148	282	912	926	54	434	936	850
14:00 - 15:00	77	290	559	650	77	423	1,183	970
15:00 - 16:00	77	254	905	718	47	597	1,364	1,124
16:00 - 17:00	147	472	1,298	1,229	82	695	1,449	1,335
17:00 - 18:00	94	405	1,232	1,010	146	429	1,281	1,178
18:00 - 19:00	221	585	1,744	1,661	201	520	1,429	1,451
19:00 - 20:00	104	428	969	979	33	410	1,099	822
20:00 - 21:00	50	168	608	475	26	135	427	328
Total	1,570	4,688	14,303	12,905	976	6,563	16,077	13,825

Note: Total numbers represent the summation from 6:00 to 20:00

12/12/2004 Sunday

Time	No. 3 West to East				No. 3 East to West			
	H	L	M	PCU/h	H	L	M	PCU/h
5:00 - 6:00	2	18	40	35	1	10	62	31
6:00 - 7:00	27	76	312	237	18	90	306	227
7:00 - 8:00	47	104	420	348	30	54	432	259
8:00 - 9:00	50	152	474	419	32	97	402	298
9:00 - 10:00	48	140	348	364	43	126	354	340
10:00 - 11:00	45	132	338	346	45	120	282	317
11:00 - 12:00	42	114	342	322	48	125	344	348
12:00 - 13:00	22	83	297	227	42	90	293	283
13:00 - 14:00	22	124	346	283	46	83	327	296
14:00 - 15:00	46	148	384	378	46	121	274	318
15:00 - 16:00	37	115	354	314	33	110	325	290
16:00 - 17:00	30	98	388	289	32	103	311	276
17:00 - 18:00	23	75	420	259	28	143	331	312
18:00 - 19:00	9	60	252	158	18	83	224	195
19:00 - 20:00	4	42	166	102	7	41	140	101
20:00 - 21:00	5	25	105	69	9	26	59	66
Total	452	1,463	4,841	4,046	468	1,386	4,345	3,860

Note: Total numbers represent the summation from 6:00 to 20:00

13/12/2004 Monday

Time	No. 3 West to East				No. 3 East to West			
	H	L	M	PCU/h	H	L	M	PCU/h
5:00 - 6:00	10	36	66	81	7	21	123	75
6:00 - 7:00	22	60	279	199	9	69	576	264
7:00 - 8:00	37	95	474	330	32	76	576	329
8:00 - 9:00	58	162	450	442	44	111	468	361
9:00 - 10:00	56	138	491	425	30	114	360	297
10:00 - 11:00	43	117	342	327	50	108	306	325
11:00 - 12:00	32	96	450	311	40	87	258	264
12:00 - 13:00	25	80	270	224	30	42	234	187
13:00 - 14:00	42	111	309	309	44	84	312	288
14:00 - 15:00	48	126	288	332	33	122	348	309
15:00 - 16:00	37	109	264	281	25	110	331	272
16:00 - 17:00	35	134	360	330	43	144	412	375
17:00 - 18:00	30	102	606	359	44	150	513	414
18:00 - 19:00	12	66	330	195	14	72	229	176
19:00 - 20:00	11	18	108	78	11	41	78	92
20:00 - 21:00	2	13	40	30	10	17	54	58
Total	488	1,414	5,021	4,142	449	1,330	5,001	3,953

Note: Total numbers represent the summation from 6:00 to 20:00



## Appendix D-2 Unit Price of Road Construction/Improvement

### 1. Applied Unit Price

Referring the latest cost estimates for other road construction scheme in Phnom Penh, the following unit prices were applied to the cost estimation of Follow-Up Study. The copy of obtained cost estimation sheet was shown the last page of this Appendix D-2.

Work Item		Unit	Unit Price (US\$)
Earth Work	Removal of top soil (t=30 cm)	m <sup>2</sup>	2
	Embankment	m <sup>3</sup>	6
	Subgrade (t=100 cm)	m <sup>3</sup>	8
	Shoulder, Median Filing	m <sup>3</sup>	4
Slope Protection	Wet Masonry	m <sup>2</sup>	100
Pavement	Subbase Course (t=30 cm)	m <sup>2</sup>	11
	Subbase Course (t=27.5 cm)	m <sup>2</sup>	10
	Subbase Course (t=27.5 cm)	m <sup>2</sup>	9
	Subbase Course (t=25 cm)	m <sup>2</sup>	8
	Base Course (Aggregate t=25 cm)	m <sup>2</sup>	9
	Base Course (Aggregate t=20 cm)	m <sup>2</sup>	7
	Base Course (A/C Mix t=5 cm)	m <sup>2</sup>	10
	Binder (t=5 cm)	m <sup>2</sup>	11
	Surface (t=5 cm)	m <sup>2</sup>	17
Bridge	PC Box Girder	m <sup>2</sup>	3,000
	PC I-Girder	m <sup>2</sup>	2,000
	Pedestrian Bridge (W=2 m, L=30 m)	m <sup>2</sup>	500
Retaining Wall	Cantilever Wall with Pile H=4 m	m	900
Drainage	Box-Culvert (1.5 m×4.5 m×2)	m	600
	Box-Culvert (3 m×2.5 m×2)	m	1,000
	Pipe Culvert (φ=1,000 mm)	m	210
	Concrete Ditch	m	270
Sidewalk	Interlocking Block (300×300)	m <sup>2</sup>	12
Road Facility	Guide Rail (Shoulder)	m	90
	Road Marking		
	- Yellow Center Line (W=15 cm)	m <sup>2</sup>	20
	- White Side Line (W=15 cm)	m <sup>2</sup>	20
	Lighting	Nos.	1,300
	Traffic Signal	Nos.	2,000

Price Level: February 2010

### 2. Typical Cross Section of Sub-arterial Road

Figure D-1 shows the typical cross section for the asphalt concrete road prepared by DPWT.

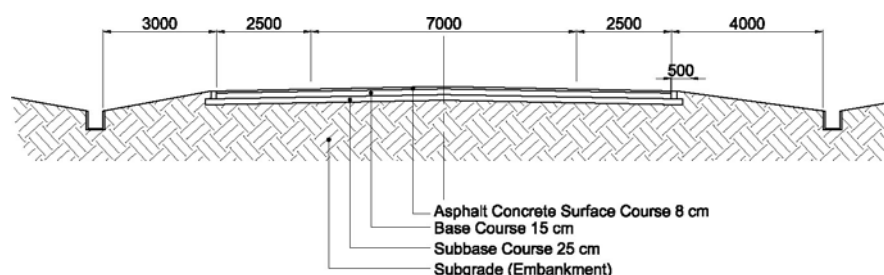
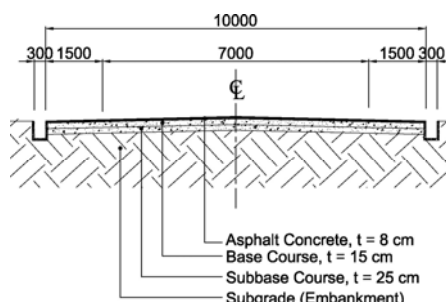


Figure D-1 Typical Cross Section of AC Paved Road

#### Sub-arterial Road within the NR6 and the Ring Road

As the majority of sub-arterial roads within the NR6 and Ring Road traverses built up area, the following cross section was proposed for the cost estimation purpose.

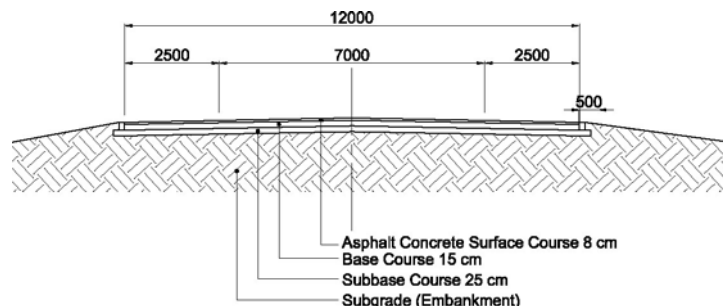


**Figure D-2 Typical Cross Section of sub-arterial road within the NR6 and the Ring Road**

The width of existing laterite roads to be improved within the city area is varied, from narrow road to wide road. Furthermore, the planned ROW of each existing road is to be decided by Department of Land Management, Urban Planning, Construction and Land Title (DLMUPC), not by DPWT. Although the Follow-Up Study Team requested DLMUPC the provision of planned ROW schedule, DLMUPCLT does not accept the request. Therefore, for the cost estimate purpose, the road width was assumed as 10 m uniformly.

#### Sub-arterial Road outside the Ring Road

The typical cross section of sub-arterial roads outside the Ring Road was proposed with 12 m road width as shown below for the cost estimation purpose. The majority of existing roads outside the Ring Road are equipped with soil ditch or irrigation canal at both sides. Considering the present situation, concrete side ditches were excluded from the road component.



**Figure D-3 Typical Cross Section of sub-arterial road outside the Ring Road**

### 3. Unit Construction Cost of Sub-arterial Road

#### Sub-arterial Road within the NR6 and the Ring Road

Unit construction cost per 1 m (length) was estimated as follows:

<u>Earthwork, Pavement Work</u>		Unit: US\$
Removal of top soil, t=48 cm	10 m <sup>2</sup> ×48/30×2 =	32
Subbase course, t=25 cm	10 m <sup>2</sup> ×8 =	80
Base course, t=15 cm	10 m <sup>2</sup> ×15/20×7 =	52.5
Asphalt binder course, t=4 cm	10 m <sup>2</sup> ×4/5×11 =	88
Asphalt surface course, t=4 cm	10 m <sup>2</sup> ×4/5×17 =	136
	Total	388.5/m
	or	38.9/m <sup>2</sup>
<u>Drainage Work</u>		Unit: US\$
Concrete ditch, both sides	2 m×270 =	540
Pipe culvert (φ=1,000 mm) per every 100 m	10 m×210/100 =	21
	Total	561/m

As sub-arterial roads within the NR6 and Ring Road traverse urbanized area, the new proposed height is recommended to keep the current existing height to maintain the accessibility to the adjacent premises. The improvement work and also new construction work will start from the excavation (removal of top soil) of existing laterite road or existing ground.

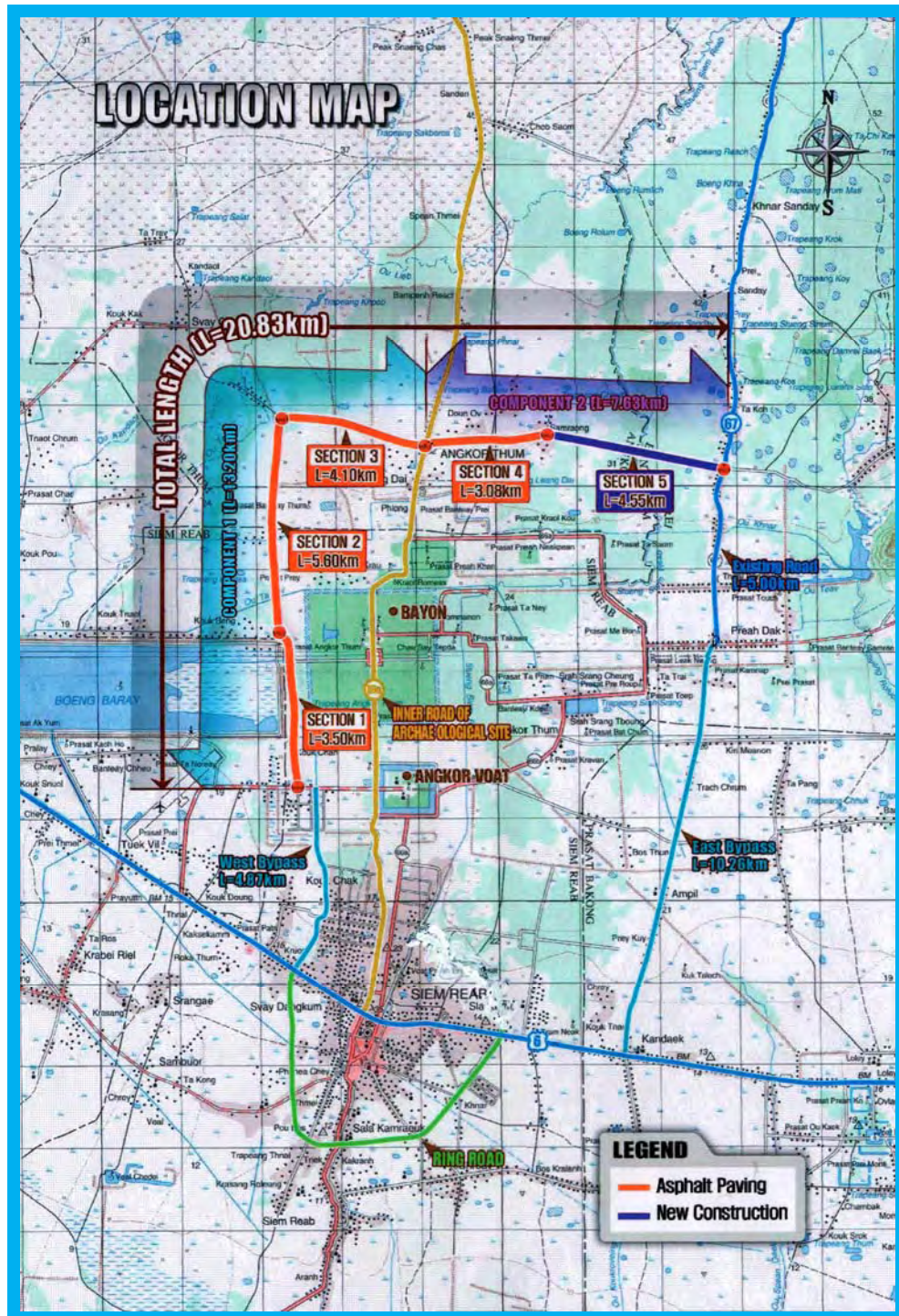
Sub-arterial Road outside the Ring Road

Unit construction cost per 1 m (length) was estimated as follows:

<u>Earthwork, Pavement Work</u>		<u>Unit: US\$</u>
Removal of top soil, t=48 cm	12 m <sup>2</sup> ×48/30×2 =	38.4
Subbase course, t=25 cm	12 m <sup>2</sup> ×8 =	96
Base course, t=15 cm	12 m <sup>2</sup> ×15/20×7 =	63
Asphalt binder course, t=4 cm	12 m <sup>2</sup> ×4/5×11 =	105.6
Asphalt surface course, t=4 cm	12 m <sup>2</sup> ×4/5×17 =	163.2
	Total	466.2/m
	or	46.6/m <sup>2</sup>
<u>Drainage Work</u>		<u>Unit: US\$</u>
Pipe culvert (φ=1,000 mm) per every 100 m	10 m×210/100 =	21
	Total	21/m



Appendix D-3 Road Improvement/Construction Plan at West/North of AAP Area

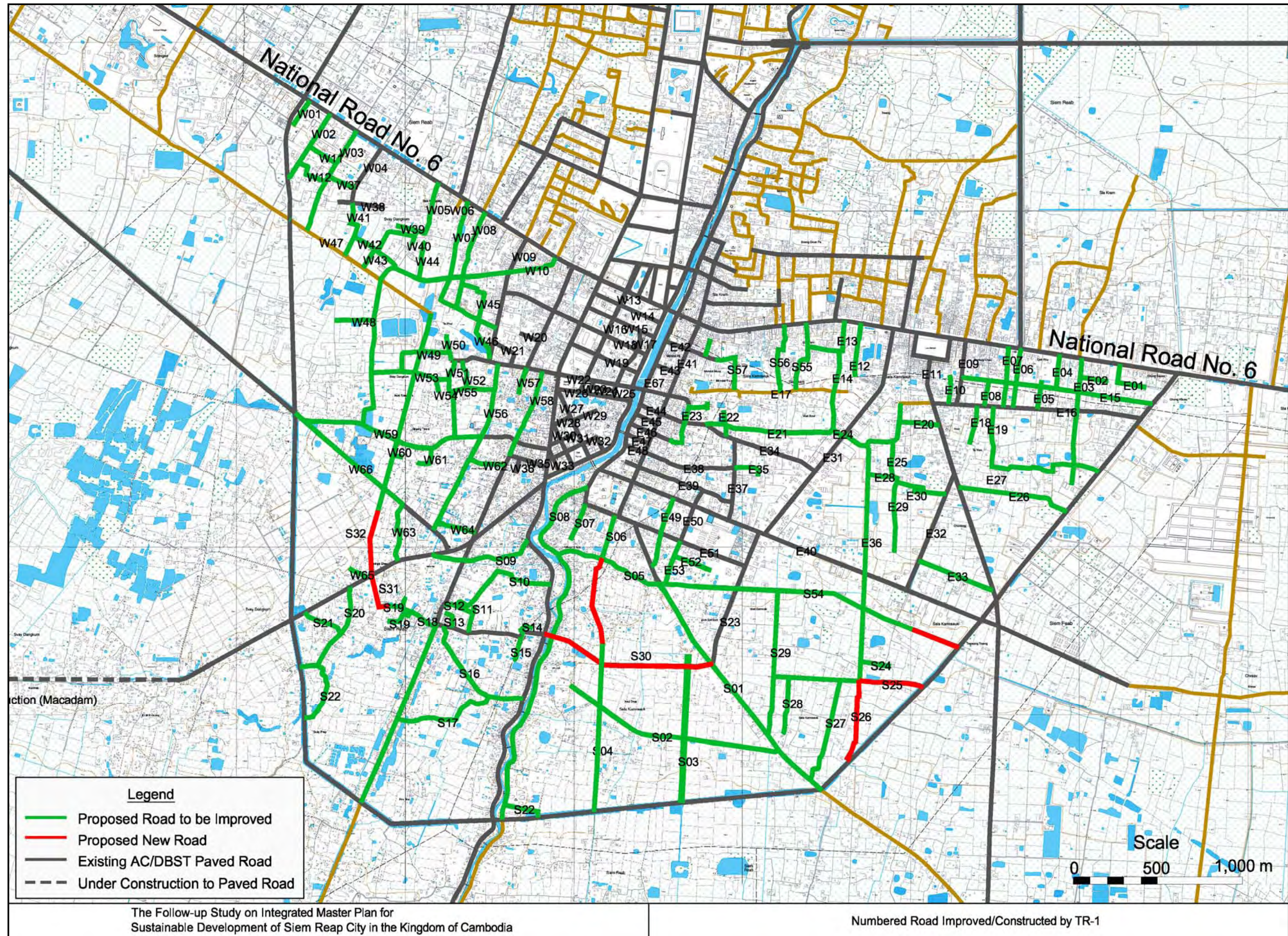


#### Appendix D-4 Length of Road proposed to improve by TR-1, TR-2 and TR-3

##### TR-1: Improvement of Sub-arterial Road Network within the NR6 and the Ring Road

Road No.	Length (m)	Road No.	Length (m)	Road No.	Length (m)
S01	1,563	W01	176	E01	283
S02	1,340	W02	460	E02	168
S03	884	W03	669	E03	759
S04	1,539	W05	688	E04	204
S05	654	W06	90	E05	175
S06	268	W07	985	E06	358
S07	231	W08	601	E07	363
S08	2,299	W10	2,035	E08	157
S09	641	W11	188	E10	178
S10	926	W12	230	E12	322
S11	45	W37	170	E13	391
S12	77	W39	688	E14	543
S13	118	W40	60	E15	1,144
S14	113	W41	363	E17	972
S15	151	W42	318	E18	234
S16	731	W43	128	E19	1,052
S17	631	W45	319	E20	240
S18	298	W46	258	E21	773
S19	180	W47	941	E22	156
S20	633	W48	237	E23	440
S21	261	W49	389	E24	543
S22	418	W50	157	E25	579
S24	182	W51	121	E26	676
S25	386	W52	340	E27	158
S26	506	W53	818	E28	149
S27	639	W54	84	E29	427
S28	351	W55	95	E30	67
S29	859	W56	1,074	E33	474
S30	1,054	W57	166	E35	186
S31	247	W58	541	E36	2,500
S32	293	W59	1,104	E49	434
		W60	1,214	E52	236
		W61	167	E53	274
		W62	217	E54	1,844
		W63	371	E55	441
		W64	242	E56	441
		W65	12	E57	312
		W66	840		
		W67	397		
Total	18,515	Total	17,952	Total	18,652







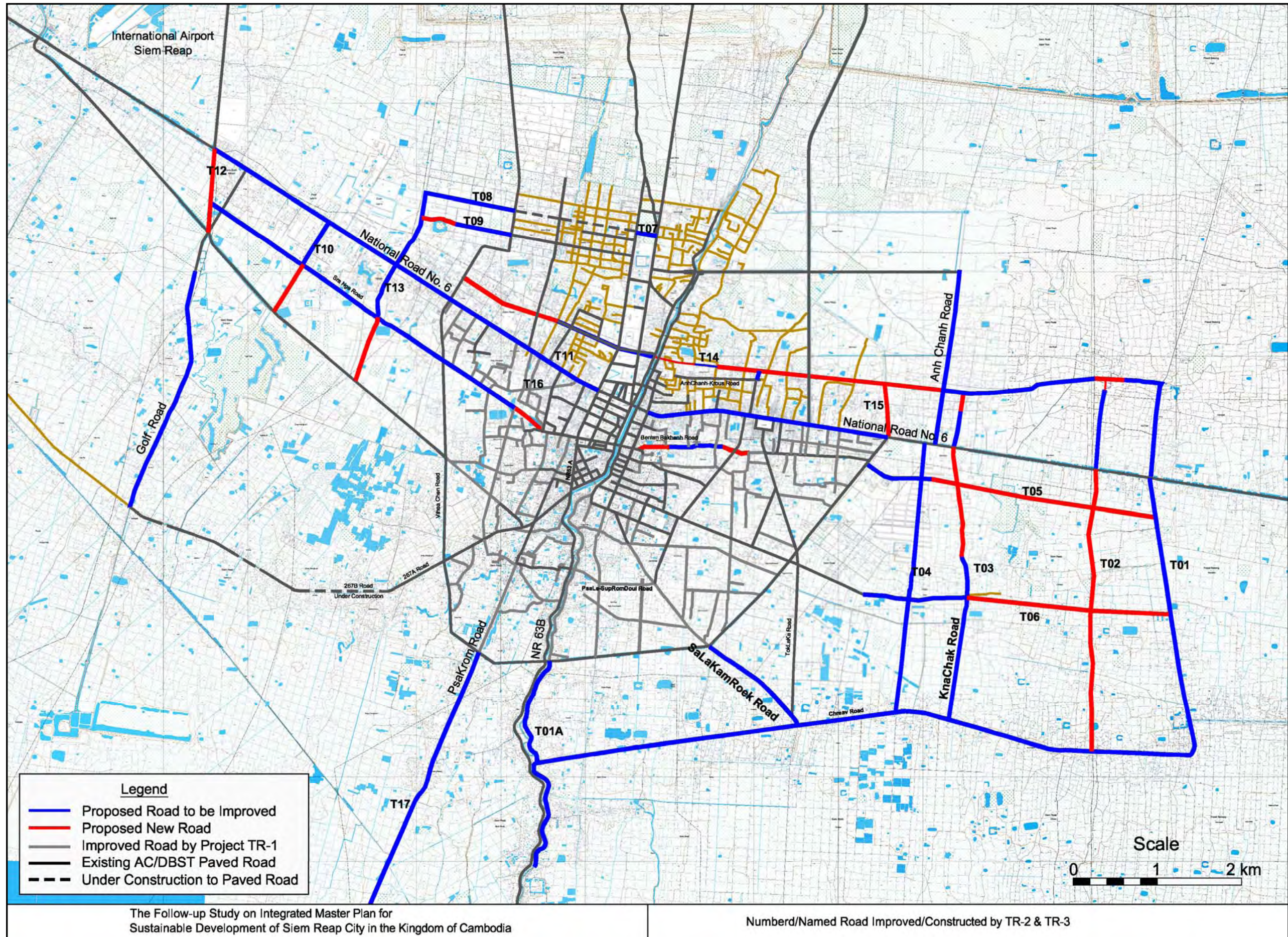
TR-2: Improvement of Sub-arterial Road Network outside the Ring Road  
 &  
TR-3: Construction of Sub-arterial Road Parallel to the NR6

		TR-2	
		Road No.	Length (m)
Improvement		T01	11,173
		NR 63B/T01A	3,790
		T02	456
		T03	2,406
		T04	2,796
		T06	851
		SaLaKamRoek Road	1,427
		PsaKrom Road/T17	3,758
		AnhChanh Road	1,443
		T07	245
		T08	3,476
		T09	676
		267B Road	3,305
		Golf Road	2,957
	Construction		T02
		T03	866
		T06	3,013
		T13	799
		T10	650
		T09	413
		T12	989
		<b>Total</b>	<b>48,395</b>

		TR-3 Parallel Road	
		Road No.	Length (m)
North	I.	T01	1,129
		T02	955
		T03	438
		T11	509
		T14	2,535
	C.	T02	128
		T14	5,207
		T03	220
		T15	637
		<b>Subtotal</b>	<b>11,758</b>
South	I.	T05	6,261
		T10	598
		T13	687
	C.	T05	3,501
		T16	749
			<b>Subtotal</b>
		<b>Total</b>	<b>23,554</b>

Note: I. = Improvement  
 C.= Construction








## **E: Minutes of Meetings**



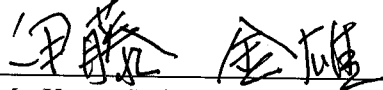
**Minutes of Meeting**  
**on**  
**The Steering Committee**  
**(on the 5<sup>th</sup> Urban Planning Technical Committee Meeting)**  
**for**  
**The Follow-up Study on**  
**Integrated Master Plan for Sustainable Development of**  
**Siem Reap City in the Kingdom of Cambodia**

Siem Reap, 11 February 2010



---

H.E. Sok Leakhena  
Deputy Governor  
Siem Reap Province Government  
Chairman of the Technical Committee



---

Mr. Kanao Itoh  
Team Leader  
JICA Study Team

Title	The Steering Committee Meeting (on the fifth Urban Planning Technical Committee) of Siem Reap Province for the Follow-up Study on Integrated Master Plan for Sustainable Development of Siem Reap City
Theme	Discussion on the Inception Report
Date	11 February 2010
Time	8:00 – 11:30
Chairman	H.E. Sok Leakhena, Deputy Governor, Siem Reap Provincial Government
Venue	Meeting Room 1, Siem Reap Provincial Hall
Participants	Refer to attached Appendix

### 1. Submission of Inception Report

The JST submitted 15 copies of Inception Report, both English and Khmer, to Siem Reap Provincial Government. The Inception Report is discussed on the Technical Committee of Siem Reap Province, which is composed of related departments of provincial government and the other related government agencies. Contents of the Inception Report were accepted by the Technical Committee.

### 2. Presentation on Inception Report

Mr. Itoh, Team leader of JST, presented the Draft Inception Report as follows:

- Objectives of the Study;
- Summary and Review of Master Plan Study;
- Approaches for the Study;
- Plan of Operation and Work Schedule

### 3. Major Point of Discussion

1) Relocation and New Provincial Government H.Q. Development Project is under construction including the access road development to the new H.Q. However, the new H.Q. and its access road were not included in the M/P.

⇒ Capacity of under constructing access road will be assessed by JST and appropriate road network link with the new H.Q. will be considered through the review of the Road Network Basic Plan of the Master Plan Study.

2) The Siem Reap River flows in the city center area from Angkor Archeological Park on the north to Tonle Sap Lake on the south. Along the river, French colonial old town

(old market area), temples and other traditional heritages are concentrated, where are identified as one of popular tourism area in Siem Reap for international tourists. Therefore, environmental condition of the Siem Reap River and its banks has to be improved and utilization of waterfront area for tourists and citizens is vital. APSARA Authority, the Provincial Government and the municipality are formulating and implementing those projects including illegal settlement relocation (approx. 500 families). Substitute land preparation project for illegal settlement relocation is also implementing on the east of Angkor Archeological Park.

=> JST will mutually coordinate with existing plans and project by related government agencies through reviewing the City Center Area Improvement Plan of the Master Plan.

3) According to the item 2), conservation of urban heritages and revitalization old town will be comprehensively considered with transportation issues of traffic and car parking through review of the City Center Area Improvement Plan.

4) DPWT and JST will set up a meeting to discuss current status of road project(s) and traffic condition of existing roads including the issue of 1).

5) Sharp increase of the number of tourists and municipal population has accelerated urbanization in Siem Reap municipality. Road development cannot catch up with rapid expansion of hotel/accommodation and residential areas.

=> Development framework/target of the master plan will be reviewed in consideration of on the trends of international/domestic tourists and population increase based on the statistical data.

#### 6) Urban Heritage

In Siem Reap, protection/conservation and balanced utilization of Urban Heritages, which are French colonial buildings, temples, traditional streetscapes, original river line with banks and big trees etc, are very important to attract rapidly increasing tourists.

=> JST will propose to establish legal measures to protect/conserves/utilize urban heritages including traditional cultural heritages as identified on the above. In the City Center Area Improvement plan, those protection/conservation/utilization of historical and traditional cultural heritages will be comprehensively coordinated with the required components of traffic control, parking space, pedestrian network for tourist, park/green areas and so on.

7) Vehicles and regional buses are controlled a direct access to the City Center Area already. However, some traffic jam on and near the City Center Area are caused, it is required to be solve on and surrounding of the City Center Area by traffic control system.

=> The issue will be solved by traffic control system with substitute measures for to get positive acceptances of local communities through the review of arterial road plan and city center improvement plan.

4. The following point was confirmed;

1) Working Group (WG) is established under the TC. WG and TC will work together with JST.

2) JST and relevant organization will hold meetings to confirm/discuss about the details of the current situation and future plan.

ជាតិ សាសនា ព្រះមហាក្សត្រ

1st TC  
12 Feb 2010

សាលាខេត្តសៀមរាប

បញ្ជីវត្តមាន

ប្រជុំស្តីពីរបាយការណ៍ក្រុមសិក្សាគ្រួសារពិភពលោក JICA  
ក្រោមអធិបតីភាព ឯកឧត្តម សុខ លក្ខិណា អភិបាលរងខេត្ត  
ថ្ងៃទី ១១ ខែ កុម្ភៈ ឆ្នាំ ២០១០ វេលាម៉ោង ០៨ : ០០ ព្រឹក  
នៅសាលាប្រជុំបណ្តុំលេខ ០១ សាលាខេត្ត

ល.រ	នាម និង គោត្តនាម	មុខងារ/តួនាទី	អង្គភាព	លេខទូរស័ព្ទ	ហត្ថលេខា
០១	ស. ខុន លក្ខិណា	អភិបាលរងខេត្ត	ខេត្តសៀមរាប		
០២	Tetsuji GOTO	JICA Advisor	Siem Reap Province	០១២៣៣៤៧៦	
០៣	Kanao ITOH	JICA Study Team			
០៤	YOKOTA Eiichi	JICA Study Team			
០៥	Masahiro IZAYAMA	"			
០៦	So Platong	SR-Municipality		០១២៧៧៥៧០	
០៧	Poch. Nath	Deputy Director Land Management		០១២៧៧៧៧១	
០៨	GHOM VAN CHHOM	CHIEF Office Planning & R Tourism Dept		០១២ ៨៣១ ៤៤០	
០៩	TEP Neth	Dir. DDPU	APSA-LIT		
១០	NETH PHACKEN	Deputy Director	DOWRAM	០១២ ៨២៥ ៧៥៧	
១១	Chhark Sina	Director	DIME	០១២ ៨៧៧ ៦០១	
១២	Kang Chantra	Deputy Director	D. P. W. T. SR	០១២ ៣២៨ ៨៨៧	
១៣	Kong Sokvan	Director of Production	SRWSA	០១២ ៨៣៩ ៨៧៨	
១៤	CHANE	Director of Project for LM Construction		០១២ ៨០៦ ៥៥៨	
១៥	FURUKAWA Hirokazu	APSARA Engineer	APSARA	០១២-៧៥១-៧៧៦	
១៦	SENG SEAB	Ass. JICA	SRPH	០១២ ៤៧ ៩៣២៣	
១៧					
១៨					
១៩					
២០					
២១					





**Minutes of Meeting  
on  
The Steering Committee  
(on the Urban Planning Technical Committee Meeting)  
for  
The Follow-up Study on  
Integrated Master Plan for Sustainable Development of  
Siem Reap City in the Kingdom of Cambodia**

H.E. Sok Leakhena  
Deputy Governor  
Siem Reap Province Government  
Chairman of the Technical Committee

Siem Reap, 19 May 2010

Mr. Kanao Itoh  
Team Leader  
JICA Study Team

Checked and agreed by

H.E. Sour Phirin,  
Siem Reap Provincial Governor

Title	The Steering Committee Meeting (on the Urban Planning Technical Committee) of Siem Reap Province for the Follow-up Study on Integrated Master Plan for Sustainable Development of Siem Reap City
Theme	Discussion on the Draft Final Report
Date	10 May 2010
Time	8:30 – 12:00
Chairman	H.E. Sour Phirin, Governor, Siem Reap Provincial Government
Venue	Meeting Room , Siem Reap Provincial Hall
Participants	Refer to attached Appendix

### 1. Submission of Draft Final Report

The JST submitted 10 copies of Draft Final Summary Report in Khmer version and 15 copies of Draft Final Main Report in English version to Siem Reap Provincial Government. The Draft Final Report was explained and discussed in the Technical Committee of Siem Reap Province, which is composed of related departments of provincial government and other related government agencies. Contents of the Draft Final Report were accepted by the Technical Committee.

### 2. Presentation on Draft Final Report

Mr. Itoh, Team leader of JST, presented the Draft Final Report as follows;

- Socioeconomic Framework,
- Road Development Plan,
- City Center Improvement Plan, and
- Recommendations.

### 3. Major Point of Discussion

#### 1) Siem Reap River Excavation

It was suggested that a project of excavating Siem Reap River bed should be included in the Master Plan in order to mitigate floods in rainy season.

#### 2) APSARA Zone

There are lots of people living in APSARA zone 1 and 2. In this regard, APSARA Authority has planned to invite people to live in Run Ta-ek village which provides a lake and infrastructures land for agriculture for people.

### 3) New Provincial Compound

New provincial compound is located in APSARA zone 2. However the development plan including access roads was approved by the Committee of APSARA

### 4) Road Development

There are issues such as lack of road network, small roads, unpaved roads and roads in bad condition in the existing urbanized area. Then the road development should be accelerated.

### 5) Signboard

It is difficult for tourists to find guesthouses, restaurants and hotels because there is no signboard, road name and house numbers. H.E. Sok Leakhena, Deputy Provincial Governor, suggested putting street naming (nickname) in the Old Market Area. DPWT explained there is a road name, such as street No.10, and DPWT does not mind to put tourists friendly naming however DPWT will use the original number for their road management.

### 6) Parking

A parking along the provincial hospital fence will be possible. It was requested JICA to provide a few parking meters.

### 7) Others

H.E. Sok Leakhena, Deputy Provincial Governor, asked members of Technical Committee and Working Group to work hard and cooperate each other in order to submit the Master Plan to Provincial Development Committee to check and evaluate it. He also requested all relevant provincial departments to enforce and follow the Master Plan as written in the Provincial decision because the Master Plan is the result of the JICA Follow-up Study.

H.E. Sour Phirin, Provincial Governor, expressed his gratitude to members of JST and mentioned that the Draft Final Report was completed and the report will be submitted to the provincial government. Finally he concluded the meeting.

### 4. The following point was confirmed;

- 1) Comments on the Draft Final Summary Report shall be submitted to JST by May 18, 2010.

- 2) Comments on the Draft Final Main Report shall be submitted to JST by May 31.
  
- 3) Both the provincial government and the JST have confirmed that the provincial government should have leadership, and relevant governmental agencies, such as the provincial government, provincial department, the municipality, and APSARA Authority, are responsible for implementation of the projects/programs proposed in the Follow-Up Study even in case the projects/programs are supported by development partners.
  
- 4) The Final Report will be disclosed both in Japan and Cambodia.

Kingdom of Cambodia  
Nation Religion King

Participants List

Stakeholder Meeting for City Center Area Improvement Under the Presence of his Excellency Sok Leakhen,  
Deputy Governor of Siem Reap Province May 05th ,2010  
Somadevy Angkor Hotel 8:00-11:30 AM

No	Name	Organization	Position	Telephone	Email
1	H.E. Sok Leakhena	Siem Reap Provincial Government	Vice Governor	097 8016666	
2	Mr. Keo Sar	Siem Reap Provincial Government	Chief, Land Office (Catastrophe office)	012 631 489	
3	Mr. Oeun Pov	Siem Reap Municipality	deputy Governor	012 677547	
4	Mr. Kang Chantra	Ministry of Public Works and transport	Deputy Chief	012320 887	<a href="mailto:kong-chantra@citylink.com.kh">kong-chantra@citylink.com.kh</a>
5	Mr. Phan Kivuth	Chamber of Commercial	Dputy Chief	092 627778	
6	Mr. Choung Sokemrak	Tourism	Deputy Chief	012 509008	
7	Mr. Heng Heurn	Commune Savdongkom	Chief of Commune Savdongkom	012 650 925	
8	Mr. Mon Then	Commer commer	Deputy Chief	012 821579	
9	Mr. Mao Chamrouen	Department of Plan and Urban paning	Deputy Dicter DLMUPC	089 887 788	
10	Ms. Tep Vattho	Apara Authority DUD	Dicter of	012 655 391	<a href="mailto:apsa.ddu@online.kh">apsa.ddu@online.kh</a>
11	Mr. Kav Reaksa	Departmnet Police	Chief Office the Police Pbulic Order	012 869 789	
12	Mr. Som Rakmey	Departmnet Police	Chief Office of Arms Traffic Crossrad	012 896 628	
13	Mr. Mak Kiry	Department of Resource and meteorology	Chief	092 903692	
14	Miss. Toung Chantha	The Red Pino	Assistant manger	012 390 610	
15	Mr. Ang Kimsoun	Ministry of Pulic Works and trasport	Deputy Chief of Public work Office	012 8211 57	<a href="mailto:angkimsorn@yahoo.com">angkimsorn@yahoo.com</a>
16	Mr. Bun Try	Angkor Palm	Owner	012 232205	
17	Sok Hout	Water Supply Authority	Chief	077 964520	
18	Mr. Lao Bunchinh	IVIVA	Owner	092 209 154	
19	Mr. Pheng Chhaivan	Eupe -Asia- Touravel	Director	017 406098	
20	Mr. Yeb Prong	Phar Chas Market ( old Market)	Manger	012 667295	
21	Mr. Kheoun sokumpisith	Department Enviroment	Deputy Chief	012 934 984	
22	Mr. Suzuki Takashi	Apara Authority DUD	Senior Advisor for Urban Planning Apsara	012 951 695	
23	Mr. Kiyoshiro Nishimura	Krorrma Travel	Dicter	017 777110	
24	Ms. Koun Saren	Chery Blossom Boutique	Sale Manasger	092318 343	
25	Mr. Seng Seab	Assistant and interpreter	JICA	012 479323	<a href="mailto:sengseab@yahoo.com">sengseab@yahoo.com</a>
26	Po Phaikun	Chiefe Gabige collection Company	GAEA	012 555119	
27	Mr. Shichi Asano	Tream Tour	Dicter Dream Tour	012 400 812	
28	Mr. Phieng Sameth	Tuk Tuk	Chief Association Tuk Tuk ( IDEA)	012 369105	
29	Mr. Bat Sombo	Hotel	Chife Association hotel Tourism ( CTSWF)	092 588888	
30	Proeun Pirum	Tour Guide	Chief Association Tour Guide	012 630 828	
31	Mr. Han SokThy	Taxi	Deputy Association Taxi	012 540 404	
32	Mr. Testuji Goto	JICA Urbaan mangerment Adviser	JICA	012 333476	<a href="mailto:bobgoto2006@yahoo.com.co.jp">bobgoto2006@yahoo.com.co.jp</a>
33	Kanoa Itho	JICA Study Team	Team Leader JICA	068 318 353	<a href="mailto:kitoh@pac10.co.jp">kitoh@pac10.co.jp</a>
34	Yokota Eiichi	JICA	Consulting Engineers		<a href="mailto:yokota-ec@n-koei.jp">yokota-ec@n-koei.jp</a>
35	Makine Kusao	JICA	PAECT	90298557	<a href="mailto:kunsao@pac10.co.jp">kunsao@pac10.co.jp</a>
36	Mashiro Ibayashi	JICA	Deverlopet Planing Depparment	077 841082	<a href="mailto:bogoto2006@yahoo.co.jp">bogoto2006@yahoo.co.jp</a>
37	Sao Vicheth	JICA	Secretary	012 916 743	<a href="mailto:vichethsao@yahoo.com">vichethsao@yahoo.com</a>
38	Tong Dara	JICA	Interpreter / Translator	012 681 1010	<a href="mailto:daratonghk@yahoo.com.sg">daratonghk@yahoo.com.sg</a>
39	Chan Det	JICA	Reseach Assistant	012 778 651	<a href="mailto:detchan2002@yahoo.com">detchan2002@yahoo.com</a>
40	Nan Lady	Provincial hall government	Assistant	092 533 421	<a href="mailto:nanlady1987@yahoo.com">nanlady1987@yahoo.com</a>