

The Preparatory Survey on Lach Huyen Port Infrastructure Construction Project (Road and Bridge) in Vietnam
FINAL REPORT-Appendix 2: Traffic Data July 2010

Year 2008		amount												Total	Total PCU	Average PCU/Mon	
Order number	Type of vehicle	Unit	Month														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Passenger		7,445	11,583	11,908	14,922	24,192	46,400	61,829	27,636	14,790	10,699	11,317	10,190	252,811		
2	Bicycle		960	814	1,092	756	1,102	1,255	1,294	1,196	1,157	1,571	1,821	1,750	14,768	2,954	246
3	Bicycle with goods					10									10	2	0
4	Motorcycle		5,714	9,073	7,380	8,553	9,464	8,631	11,020	8,619	7,895	7,284	8,005	7,932	99,570	29,871	2,489
5	Cycle																
6	Car 4-6 seats		342	317	394	529	740	998	1,480	655	407	278	306	319	6,765	6,765	564
7	Bus		563	551	727	1,014	1,592	3,567	4,536	1,896	824	577	586	568	17,001	36,914	3,076
	< 9 seats		229	229	274	487	618	1,064	1,363	642	284	218	246	272	5,926	11,852	988
	9-24 seats		139	162	204	258	419	1,100	1,646	638	258	145	164	119	5,252	10,504	875
	24-32 seats		36	34	105	133	324	964	1,082	369	123	65	55	49	3,339	8,348	696
	< 32 seats		159	126	144	136	231	439	445	247	159	149	121	128	2,484	6,210	518
8	Truck		760	485	836	1,012	1,158	1,112	1,011	700	654	876	743	741	10,107	20,347	1,696
	< 1 ton																
	with goods		41	24	41	40	33	12	53	36	29	48	26	43	458	916	76
	non goods		46	38	41	45	47	33	42	31	22	40	25	49	448	896	75
	1 ton-3 ton																
	with goods		148	110	170	197	266	226	246	161	162	217	176	168	2,247	4,494	375
	non goods		182	164	166	179	194	224	238	172	171	200	171	193	2,194	4,388	366
	3 ton-5 ton																
	with goods		135	89	132	141	160	128	152	102	109	130	116	107	1,501	3,002	250
	non goods		92	53	87	75	92	77	86	69	85	121	106	82	1,035	2,050	171
	5 ton-10 ton																
	with goods		60	37	83	220	215	277	320	61	37	52	89	53	1,274	2,548	212
	non goods		47	32	83	69	84	97	58	55	34	50	48	38	695	1,390	116
	10 ton-13 ton																
	with goods		6	3	20	38	39	23	13	11	4	10	15	4	186	465	39
	non goods		1	5	13	8	18	16	3	2	1	7	1	4	79	198	17
9	Livestock																
10	Goods more 61 kg				10							1			10		
	Total		8,339	11,240	10,429	11,874	14,056	15,583	19,341	13,866	10,937	10,586	11,461	11,310	148,221	96,853	8,071

Year 2009		amount												Total	Total PCU	Average PCU/Mon	
Order number	Type of vehicle	Unit	Month														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Passenger		12,335	9,968	12,216	18,443	28,604	47,660	47,945	21,891	13,115	10,469	9,790	8,985	241,421		
2	Bicycle		996	675	772	734	839	1,086	838	869	1,238	1,678	2,007	1,446	13,198	2,640	220
3	Bicycle with goods																
4	Motorcycle		10,664	7,079	7,940	9,218	9,934	9,714	10,545	8,418	8,282	7,458	7,198	7,944	103,434	31,030	2,586
5	Cycle																
6	Car 4-6 seats		387	252	452	567	747	1,160	1,324	597	371	340	338	346	6,881	6,881	573
7	Bus		543	482	747	1,079	1,836	3,628	3,822	1,520	729	599	559	510	16,054	34,761	2,897
	< 9 seats		283	228	358	472	667	1,213	1,288	550	292	274	250	255	6,130	12,260	1,022
	9-24 seats		89	95	167	291	507	1,123	1,371	480	166	113	125	92	4,619	9,238	770
	24-32 seats		35	41	78	173	412	863	843	304	126	81	58	37	3,051	7,628	636
	< 32 seats		136	118	144	143	250	429	320	186	145	131	126	126	2,254	5,635	470
8	Truck		578	583	842	890	888	1,061	1,137	1,040	823	880	783	877	10,382	20,898	1,742
	< 1 ton																
	with goods		40	27	49	63	56	52	44	45	40	55	28	42	541	1,082	90
	non goods		71	52	51	56	53	46	43	40	52	57	26	46	593	1,186	99
	1 ton-3 ton																
	with goods		138	113	208	215	212	254	276	258	205	198	208	238	2,503	5,006	417
	non goods		156	139	247	222	212	268	276	280	195	217	189	207	2,608	5,216	435
	3 ton-5 ton																
	with goods		56	89	79	111	94	140	159	120	80	98	104	92	1,222	2,444	204
	non goods		57	71	64	90	92	96	150	129	89	96	56	62	1,052	2,104	175
	5 ton-10 ton																
	with goods		38	43	70	62	74	98	89	84	70	64	75	69	836	1,672	139
	non goods		30	43	58	54	65	85	89	72	63	64	66	71	760	1,520	127
	10 ton-13 ton																
	with goods		8	2	7	10	22	14	8	9	25	20	19	43	187	468	39
	non goods		4	4	9	7	8	8	3	3	4	11	12	7	80	200	17
9	Livestock																
10	Goods more 61 kg																
	Total		13,108	9,071	10,753	12,488	14,264	16,649	17,666	12,444	11,443	10,955	10,885	10,223	149,949	96,210	8,018

4.4. Ferry Track Record Survey Data (Cat Hai – Cat Ba Ferry)

Year 2002			amount												Total	Total PCU	Average PCU/Mon.
Order number	Type of vehicle	Unit	Month														
			Jan.	Feb.	Mar.	Apr.	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Passenger						14,342	47,522	44,075	25,636	13,739	9,178	7,203	7,660	169,355		
2	Bicycle						935	2,168	2,535	2,192	1,661	1,180	1,142	1,528	13,341	2,668	334
3	Bicycle with goods																
4	Motorcycle						4,058	10,875	10,415	9,085	8,228	5,936	4,941	5,338	59,776	17,933	2,242
5	Cyelo						1	4	2						7	2	0
6	Car 4-6 seats						355	1,058	918	489	258	254	159	146	3,637	3,637	455
7	Bus						728	2,616	2,327	1,206	560	468	317	369	8,591	19,085	2,386
	< 9 seats						76	274	325	210	157	116	72	66	1,296	2,592	324
	9-24 seats						321	1,124	1,009	521	381	157	77	101	3,491	6,982	873
	24-32 seats						201	852	692	359	173	148	106	132	2,663	6,658	832
	< 32 seats						130	366	301	116	49	47	62	70	1,141	2,853	357
8	Truck						223	323	315	426	448	553	582	681	3,551	7,148	894
	< 1 ton																
	with goods						16	15	12	18	14	17	19	26	137	274	34
	non goods						16	26	16	20	26	20	25	33	182	364	46
	1 ton-3 ton																
	with goods						68	108	98	150	148	173	165	206	1,116	2,232	279
	non goods						64	74	70	103	116	151	141	184	995	1,810	226
	3 ton-5 ton																
	with goods						8	20	31	35	29	53	39	62	277	554	69
	non goods						11	23	26	26	31	38	34	57	246	492	62
	5 ton-10 ton																
	with goods						10	27	32	34	42	57	69	52	323	646	81
	non goods						20	21	24	36	35	39	55	44	274	548	69
	10 ton-13 ton																
	with goods						5	4	5	2	5	3	31	15	70	175	22
	non goods						5	5	1		2	2	4	2	21	53	7
9	Livestock																
10	Goods more 61 kg																
	Total						6,300	17,044	16,512	14,298	11,155	8,391	7,141	8,062	88,903	50,473	6,309

Year 2003			amount												Total	Total PCU	Average PCU/Mon.
Order number	Type of vehicle	Unit	Month														
			Jan.	Feb.	Mar.	Apr.	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Passenger		8,648	7,917	7,675	8,887	10,287	23,187	17,977	13,617	4,038	2,673	2,144	1,660	108,700		
2	Bicycle		1,998	646	463	307	133	83	37	44	35	13	16	22	3,797	759	63
3	Bicycle with goods																
4	Motorcycle		6,651	3,944	3,606	3,512	2,700	1,913	1,279	1,129	621	426	417	351	26,549	7,965	664
5	Cyelo		2												2	1	0
6	Car 4-6 seats		121	200	249	352	527	1,004	799	600	256	304	202	195	4,809	4,809	401
7	Bus		300	230	431	507	718	2,008	1,517	1,179	384	302	303	253	8,132	17,830	1,486
	< 9 seats		49	39	124	118	113	278	177	247	95	80	52	50	1,422	2,844	237
	9-24 seats		70	79	146	191	317	915	778	567	181	132	100	103	3,579	7,158	597
	24-32 seats		114	44	72	109	176	585	414	300	70	41	48	22	1,995	4,988	416
	< 32 seats		67	68	89	89	112	230	148	65	38	49	103	78	1,136	2,840	237
8	Truck		625	357	674	533	506	375	307	343	374	434	375	345	5,248	10,676	886
	< 1 ton																
	with goods		20	20	39	34	39	25	24	22	21	22	7	16	289	578	48
	non goods		21	18	52	43	43	46	23	39	15	30	11	18	359	718	60
	1 ton-3 ton																
	with goods		177	95	191	150	125	95	84	81	93	101	94	89	1,375	2,750	229
	non goods		149	78	135	142	113	112	65	52	108	108	94	70	1,226	2,452	204
	3 ton-5 ton																
	with goods		48	32	73	48	54	27	29	34	28	43	41	51	508	1,016	85
	non goods		42	24	61	37	39	18	16	29	31	37	47	41	422	844	70
	5 ton-10 ton																
	with goods		57	33	43	28	31	23	33	40	29	29	22	19	387	774	65
	non goods		56	42	43	22	30	21	32	37	39	38	24	20	404	808	67
	10 ton-13 ton																
	with goods		43	7	25	14	12	6	1	4	5	15	30	13	175	438	37
	non goods		12	8	12	15	20	2		5	5	11	5	8	103	258	22
9	Livestock																
10	Goods more 61 kg																
	Total		9,697	5,277	5,423	5,211	4,584	5,383	3,939	3,295	1,670	1,479	1,313	1,166	48,537	42,000	3,500

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FINAL REPORT-Appendix 2: Traffic Data July 2010

Year 2004															Total	Total PCU	Average PCU/Mon
Order number	Type of vehicle	Unit	amount														
			Month														
Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.						
1	Passenger		1,374	1,943	2,199	5,344	12,946	24,428	33,590	20,067	9,913	9,589	7,456	7,181	136,030		
2	Bicycle		26	12	156	113	40	37	1,074	1,171	966	754	780	980	6,109	1,222	102
3	Bicycle with goods																
4	Motorcycle		346	287	299	1,180	2,892	1,477	7,671	6,468	5,463	5,684	4,480	4,234	40,481	12,144	1,012
5	Cycle																
6	Car 4-6 seats		144	217	279	435	794	907	1,116	653	371	261	196	234	5,607	5,607	467
7	Bus		252	282	362	505	985	2,180	2,579	1,578	533	408	336	283	10,283	22,445	1,870
	< 9 seats		70	91	127	127	285	390	485	310	160	123	78	67	2,313	4,626	386
	9-24 seats		79	83	124	215	377	936	1,202	745	158	111	101	81	4,212	8,424	702
	24-32 seats		25	48	39	59	180	590	692	355	102	47	35	26	2,198	5,495	458
	< 32 seats		78	60	72	104	143	264	200	168	113	127	122	109	1,560	3,900	325
8	Truck		291	138	438	446	491	453	456	498	322	369	337	342	4,751	9,712	809
	< 1 ton																
	with goods		12	20	34	24	34	22	28	40	18	19	20	18	289	578	48
	non goods		14	27	29	17	21	20	26	41	18	15	22	14	266	532	44
	1 ton-3 ton																
	with goods		79	78	113	121	122	114	136	148	79	81	74	84	1,229	2,458	205
	non goods		70	63	88	115	91	98	105	99	60	59	62	68	981	1,962	164
	3 ton-5 ton																
	with goods		38	40	37	50	59	58	46	38	32	60	38	33	529	1,058	88
	non goods		43	39	38	45	48	39	33	35	16	35	27	29	427	854	71
	5 ton-10 ton																
	with goods		11	24	29	27	40	32	31	32	19	24	27	28	324	648	54
	non goods		10	24	29	29	37	29	17	25	22	19	22	25	288	576	48
	10 ton-13 ton																
	with goods		6	12	12	7	21	24	9	20	28	24	26	20	211	528	44
	non goods		8	11	19	11	12	17	4	20	30	33	19	23	207	518	43
9	Livestock																
10	Goods more 61 kg						3								3		
	Total		1,059	1,136	1,524	2,679	5,202	5,054	12,876	10,368	7,655	7,476	6,129	6,073	67,231	51,130	4,261

Year 2005															Total	Total PCU	Average PCU/Mon
Order number	Type of vehicle	Unit	amount														
			Month														
Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.						
1	Passenger		6,628	10,410	9,588	15,015	21,392	36,067	48,788	29,051	18,022	13,798	13,104	10,175	232,038		
2	Bicycle		908	1,041	967	976	943	1,031	751	1,071	993	928	1,041	1,109	11,759	2,352	196
3	Bicycle with goods																
4	Motorcycle		1,789	5,428	5,404	7,070	7,734	7,226	8,920	9,058	7,653	7,110	6,849	5,610	81,851	24,555	2,046
5	Cycle																
6	Car 4-6 seats		213	196	316	497	790	1,036	1,234	551	332	214	171	189	5,731	5,731	478
7	Bus		274	259	366	674	1,286	2,650	3,357	1,354	708	457	433	348	12,166	26,671	2,223
	< 9 seats		99	100	144	226	345	551	623	333	216	124	126	95	2,982	5,964	497
	9-24 seats		62	64	84	255	519	974	1,502	459	234	138	113	102	4,506	9,012	751
	24-32 seats		14	19	24	65	248	873	955	335	104	46	49	20	2,752	6,880	573
	< 32 seats		99	76	114	128	171	252	277	227	154	149	145	131	1,926	4,815	401
8	Truck		336	195	423	389	331	373	358	453	302	447	375	429	4,501	9,198	767
	< 1 ton																
	with goods		23	19	34	16	31	29	17	21	9	17	16	24	256	512	43
	non goods		22	14	45	16	35	27	20	28	17	27	22	41	314	628	52
	1 ton-3 ton																
	with goods		87	26	88	93	58	80	101	123	95	118	96	92	1,057	2,114	176
	non goods		57	31	79	72	47	80	67	88	83	85	81	85	855	1,710	143
	3 ton-5 ton																
	with goods		21	17	33	48	43	55	54	84	95	71	75	65	661	1,322	110
	non goods		25	7	34	31	26	30	26	42	43	43	42	40	389	778	65
	5 ton-10 ton																
	with goods		34	19	30	38	31	35	26	23	19	28	17	34	334	668	56
	non goods		27	16	26	28	13	25	20	11	16	25	13	24	244	488	41
	10 ton-13 ton																
	with goods		22	21	29	28	28	8	16	19	5	24	9	15	224	560	47
	non goods		18	25	25	19	19	4	11	14	10	9	4	9	167	418	35
9	Livestock																
10	Goods more 61 kg																
	Total		5,522	7,119	7,496	9,606	11,084	12,316	14,620	12,487	10,078	9,156	8,869	7,655	116,008	68,507	5,709

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FINAL REPORT-Appendix 2: Traffic Data July 2010

Year 2006		amount												Total	Total PCU	Average PCU/Mon	
Order number	Type of vehicle	Unit	Month														
			Jan.	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Passenger		11,319	14,268	12,239	18,077	22,949	48,293	48,151	18,656	14,447	10,804	8,706	9,045	236,954		
2	Bicycle		1,273	941	776	596	895	893	852	639	544	336	450	480	8,675	1,735	145
3	Bicycle with goods																
4	Motorecycle		6,812	6,990	5,543	6,413	6,304	5,559	5,762	3,516	4,389	4,546	4,412	4,733	64,979	19,494	1,625
5	Cyclo																
6	Car 4-6 seats		192	182	261	467	531	844	996	337	366	237	162	154	4,729	4,729	394
7	Bus		324	337	463	890	1,222	3,398	3,684	1,243	747	532	383	368	13,591	30,007	2,501
	< 9 seats		95	105	155	316	362	663	811	302	208	145	112	75	3,349	6,698	558
	9-24 seats		99	87	113	304	401	1,136	1,498	414	225	122	81	112	4,592	9,184	765
	24-32 seats		15	18	50	108	262	1,088	972	299	125	67	21	35	3,060	7,650	638
	< 32 seats		115	127	145	162	197	511	403	228	189	198	140	146	2,590	6,475	540
8	Truck		365	312	511	542	528	604	513	390	365	363	369	400	5,262	10,297	858
	< 1 ton																
	with goods		22	16	25	21	39	20	21	25	14	23	19	27	272	544	45
	non goods		27	10	16	15	18	20	13	16	9	12	15	17	188	376	31
	1 ton-3 ton																
	with goods		91	105	126	131	118	151	137	82	78	74	89	86	1,268	2,536	211
	non goods		85	60	109	122	102	144	96	75	79	54	65	69	1,060	2,120	177
	3 ton-5 ton																
	with goods		44	42	86	100	96	106	99	66	73	70	72	60	914	1,828	152
	non goods		37	29	64	68	61	48	50	31	40	44	40	38	550	1,100	92
	5 ton-10 ton																
	with goods		14	13	28	34	39	42	38	33	30	35	28	39	373	746	62
	non goods		15	11	22	27	26	28	23	24	19	25	15	27	261	522	44
	10 ton-13 ton																
	with goods		15	14	20	15	17	28	22	20	11	14	15	19	240	525	44
	non goods		15	12	15	9	12	17	15	18	12	12	11	18	166	415	35
9	Livestock																
10	Goods more 61 kg																
	Total		8,966	8,762	7,554	8,908	9,480	11,298	13,807	6,125	6,411	6,014	5,776	6,135	97,236	66,262	5,522

Year 2007		amount												Total	Total PCU	Average PCU/Mon	
Order number	Type of vehicle	Unit	Month														
			Jan.	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Passenger		7,284	9,247	7,785	15,229	14,396	58,478	58,381	26,912	13,881	6,394	6,161	6,515	330,663		
2	Bicycle		207	328	324	210	281	557	363	138	120	132	198	103	2,961	592	49
3	Bicycle with goods																
4	Motorecycle		3,615	5,140	3,837	5,119	4,234	6,418	5,577	4,366	3,778	3,086	3,599	3,503	52,292	15,688	1,307
5	Cyclo																
6	Car 4-6 seats		144	130	155	512	329	1,134	1,190	721	371	157	180	130	5,153	5,153	429
7	Bus		244	148	388	975	946	4,394	4,790	2,197	810	419	417	423	16,051	35,158	2,930
	< 9 seats		95	79	128	422	271	978	1,152	621	323	146	139	137	4,491	8,982	749
	9-24 seats		59	54	90	287	279	1,469	1,815	758	315	105	121	97	5,449	10,898	908
	24-32 seats		32	14	31	123	177	1,380	1,296	480	172	30	31	59	3,829	9,573	798
	< 32 seats		58	1	39	143	219	567	527	338		134	126	130	2,382	5,705	475
8	Truck		310	173	273	393	310	562	571	466	374	364	437	379	4,612	9,291	774
	< 1 ton																
	with goods		30	13	23	18	21	31	43	23	23	25	25	27	302	604	50
	non goods		11	10	9	13	12	21	24	15	15	12	20	20	182	364	30
	1 ton-3 ton																
	with goods		78	52	87	110	87	158	135	123	100	86	94	92	1,202	2,404	200
	non goods		71	30	41	87	38	110	127	116	76	61	78	55	890	1,780	148
	3 ton-5 ton																
	with goods		47	26	40	55	52	105	114	79	72	72	90	53	805	1,610	134
	non goods		28	12	23	34	29	56	49	39	40	43	51	37	441	882	74
	5 ton-10 ton																
	with goods		23	13	26	34	41	47	42	38	20	30	32	50	396	792	66
	non goods		15	10	15	25	18	31	30	22	14	17	27	36	260	520	43
	10 ton-13 ton																
	with goods		1	5	6	13	4	2	4	8	8	14	11	4	80	200	17
	non goods		6	2	3	4	8	1	3	3	6	4	9	5	54	135	11
9	Livestock																
10	Goods more 61 kg																
	Total		4,520	5,919	4,897	7,209	6,100	13,065	12,491	7,888	5,453	4,158	4,831	4,538	81,069	65,882	5,490

**The Preparatory Survey on Lach Huyen Port Infrastructure Construction Project (Road and Bridge) in Vietnam
FINAL REPORT-Appendix 2: Traffic Data July 2010**

Year 2008																	
Order number	Type of vehicle	Unit	amount												Total	Total PCU	Average PCU/Mon
			Month														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Passenger		4,870	8,282	8,997	11,893	19,748	41,798	51,330	23,679	12,086	8,571	8,923	8,086	208,183		
2	Bicycle		152	44	172	87	52	40	46	42	20	22	67	73	817	163	14
3	Bicycle with goods																
4	Motorcycle		2,682	4,610	4,344	4,768	4,911	4,751	6,019	4,615	4,431	4,244	4,603	4,325	54,325	16,298	1,358
5	Cyclo																
6	Car 4-6 seats		118	108	246	394	593	970	1,326	572	256	162	173	174	5,116	5,116	426
7	Bus		338	328	553	903	1,383	3,567	4,388	1,899	801	548	467	460	15,615	34,088	2,841
	< 9 seats		115	98	227	404	539	1,056	1,307	583	294	202	197	195	5,217	10,434	870
	9-24 seats		57	78	114	241	363	1,122	1,570	638	245	141	117	98	4,784	9,568	797
	24-32 seats		15	25	66	115	261	958	1,043	424	88	52	27	37	3,111	7,778	648
	< 32 seats		151	127	146	143	220	431	468	254	174	153	126	130	2,523	6,308	526
8	Truck		324	233	492	634	507	479	564	395	388	561	456	492	5,525	11,193	933
	< 1 ton																
	with goods		28	18	41	37	28	21	33	22	19	33	24	37	341	682	57
	non goods		17	6	30	26	23	17	19	15	13	25	13	29	233	466	39
	1 ton-3 ton																
	with goods		70	53	101	149	126	114	142	97	90	145	105	100	1,292	2,584	215
	non goods		68	55	109	141	106	126	157	107	112	138	100	132	1,351	2,702	223
	3 ton-5 ton																
	with goods		41	39	81	77	91	93	74	46	62	80	69	76	829	1,658	138
	non goods		28	26	51	37	29	44	34	26	39	55	54	43	466	932	78
	5 ton-10 ton																
	with goods		34	12	30	47	41	35	53	37	26	34	35	29	413	826	69
	non goods		25	10	26	33	28	26	33	36	17	26	32	23	315	630	53
	10 ton-13 ton																
	with goods		7	8	10	74	20	2	15	7	8	19	23	14	207	518	43
	non goods		6	6	13	13	15	1	4	2	2	6	1	9	78	195	16
9	Livestock																
10	Goods more 61 kg																
	Total		3,614	5,323	5,807	6,790	7,468	9,801	12,343	7,523	5,896	5,557	5,766	5,524	81,418	66,858	5,572

Year 2009																	
Order number	Type of vehicle	Unit	amount												Total	Total PCU	Average PCU/Mon
			Month														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Passenger		8,516	9,965	10,382	14,171	25,119	43,405	4,114	18,035	9,713	7,362	6,687	6,382	200,851		
2	Bicycle		23	45	42	53	47	36	62	19	23	5	1,231	1,184	2,770	554	46
3	Bicycle with goods																
4	Motorcycle		4,663	4,856	4,937	5,136	6,163	5,909	6,238	5,138	4,236	3,885	4,128	4,098	59,387	17,816	1,485
5	Cyclo																
6	Car 4-6 seats		163	194	318	456	725	1,077	1,255	558	283	229	191	204	5,653	5,653	471
7	Bus		451	433	654	1,072	2,047	3,815	3,961	1,612	693	547	471	423	16,179	35,187	2,932
	< 9 seats		184	174	284	477	780	1,215	1,268	570	259	238	184	190	5,823	11,646	971
	9-24 seats		86	95	151	262	549	1,178	1,418	506	167	98	115	74	4,699	9,308	783
	24-32 seats		30	39	78	165	438	914	873	330	124	75	42	33	3,141	7,853	654
	< 32 seats		151	125	141	168	280	508	402	143	136	130	126	2,516	6,290	524	
8	Truck		348	423	689	667	567	761	781	721	577	560	558	566	7,218	14,552	1,213
	< 1 ton																
	with goods		31	27	44	43	39	41	37	46	36	46	32	38	460	920	77
	non goods		53	44	44	46	29	29	28	45	42	34	21	38	453	906	76
	1 ton-3 ton																
	with goods		71	85	162	175	146	175	188	163	150	148	152	157	1,772	3,544	295
	non goods		71	90	210	179	154	188	199	152	132	144	126	147	1,792	3,584	299
	3 ton-5 ton																
	with goods		39	57	69	77	61	103	130	107	60	65	85	56	909	1,818	152
	non goods		30	45	51	52	49	78	76	65	52	41	42	44	625	1,250	104
	5 ton-10 ton																
	with goods		23	34	48	36	40	73	64	52	40	35	52	44	541	1,082	90
	non goods		18	33	38	31	29	60	46	60	29	23	31	37	435	870	73
	10 ton-13 ton																
	with goods		9	2	13	19	9	8	7	29	31	19	11	2	159	398	33
	non goods		3	6	10	9	11	6	6	2	5	5	6	3	72	180	15
9	Livestock																
10	Goods more 61 kg																
	Total		5,648	5,951	6,640	7,384	9,549	11,598	12,297	8,048	5,812	5,226	6,579	6,475	91,207	73,762	6,147

4.5. The total number of vehicles priority (Dinh Vu-Cat Hai Ferry)

Year	Month	Type of vehicle															
		Total	Car-4 seats	Car-<9 seats	Bus-9<24	Bus-24<32	Bus more 32 seats	Truck <1 ton with good	Truck <1 ton non goods	Truck 1-3 ton with good	Truck 1-3 ton non goods	Truck 3-5 ton with good	Truck 3-5 ton non goods	Truck 5-10 ton with good	Truck 5-10 ton non goods	Truck 10-13 ton with good	Truck 10-13 ton non goods
2002	Jan																
	Feb																
	Mar																
	Apr																
	May																
	Jun	467	266	36	129	32	2	0	0	2	0	0	0	0	0	0	0
	Jul	636	336	30	248	22	0	0	0	0	0	0	0	0	0	0	0
	Aug	444	296	28	104	16	0	0	0	0	0	0	0	0	0	0	0
	Sep	251	135	9	104	3	0	0	0	0	0	0	0	0	0	0	0
	Oct	401	203	46	142	10	0	0	0	0	0	0	0	0	0	0	0
	Nov	255	111	42	100	2	0	0	0	0	0	0	0	0	0	0	0
	Dec	235	63	46	122	4	0	0	0	0	0	0	0	0	0	0	0
	Total	2649	1410	237	949	89	2	0	0	2	0	0	0	0	0	0	0
Ave./Mon	384.1	201.4	33.9	135.6	12.7	0.3	-	-	0.3	-	-	-	-	-	-	-	
2003	Jan	151	56	22	69	4	0	0	0	0	0	0	0	0	0	0	
	Feb	185	72	23	86	4	0	0	0	0	0	0	0	0	0	0	
	Mar	196	70	28	92	2	4	0	0	0	0	0	0	0	0	0	
	Apr	226	88	14	122	2	0	0	0	0	0	0	0	0	0	0	
	May	230	80	22	120	8	0	0	0	0	0	0	0	0	0	0	
	Jun	387	164	32	189	2	0	0	0	0	0	0	0	0	0	0	
	Jul	597	228	66	231	50	2	0	0	8	0	10	0	4	0	0	
	Aug	395	222	46	117	8	0	0	0	0	0	0	0	0	0	0	
	Sep	239	142	15	78	3	2	0	0	1	0	0	0	0	0	0	
	Oct	219	143	30	42	2	0	0	0	0	0	0	0	0	0	0	
	Nov	143	109	4	28	0	0	0	0	1	1	0	0	0	0	0	
	Dec	160	120	12	24	4	0	0	0	0	0	0	0	0	0	0	
	Total	3128	1494	314	1198	89	8	0	0	10	1	10	0	4	0	0	
Ave./Mon	260.7	124.5	26.2	99.8	7.4	0.7	-	-	0.8	0.1	0.8	-	0.3	-	-		
2004	Jan	98	80	4	9	0	0	0	0	1	2	1	0	0	0	0	
	Feb	206	168	13	21	2	2	0	0	0	0	0	0	0	0	0	
	Mar	531	348	60	54	24	21	6	1	15	3	11	4	3	1	1	
	Apr	175	151	4	14	4	2	0	0	0	0	0	0	0	0	0	
	May	196	140	2	36	6	4	0	0	3	1	0	0	1	1	0	
	Jun	330	230	44	50	16	4	0	0	4	0	0	0	1	1	0	
	Jul	368	187	26	113	21	11	0	0	4	0	2	0	2	0	0	
	Aug	368	178	52	81	12	7	0	0	2	0	2	0	14	0	0	
	Sep	133	107	16	22	2	2	0	0	0	0	0	0	1	0	0	
	Oct	123	90	14	18	0	0	0	0	1	0	0	0	0	0	0	
	Nov	41	29	8	4	0	0	0	0	0	0	0	0	0	0	0	
	Dec	101	68	14	17	0	0	0	0	1	0	1	0	0	0	0	
	Total	2742	1776	257	439	111	53	6	1	30	5	21	5	22	3	1	
Ave./Mon	260.7	124.5	26.2	99.8	7.4	0.7	-	-	0.8	0.1	0.8	-	0.3	-	-		
2005	Jan	150	97	19	28	0	0	0	0	2	0	1	0	3	0	0	
	Feb	178	141	11	17	2	3	0	0	0	0	0	4	0	0	0	
	Mar	238	146	29	37	9	2	0	0	2	2	2	4	3	0	0	
	Apr	195	128	30	27	1	0	0	0	1	0	2	2	1	3	0	
	May	220	95	28	67	9	6	0	0	1	0	5	4	3	2	0	
	Jun	420	251	45	77	14	21	0	0	2	0	3	1	3	3	0	
	Jul	423	204	61	87	48	16	0	0	3	0	0	0	4	0	0	
	Aug	155	98	29	26	0	0	0	0	0	0	0	0	2	0	0	
	Sep	135	89	19	22	2	1	0	0	1	1	0	0	0	0	0	
	Oct	129	85	20	15	0	0	0	0	3	2	0	0	2	2	0	
	Nov	81	33	19	20	0	0	0	0	0	0	1	1	5	2	0	
	Dec	110	68	12	16	0	1	0	0	2	0	5	2	2	2	0	
	Total	2434	1435	322	439	85	50	0	0	17	5	19	12	33	17	0	
Ave./Mon	202.8	119.6	26.8	36.6	7.1	4.2	-	-	1.4	0.4	1.6	1.0	2.8	1.4	-		
2006	Jan	109	89	2	11	1	0	0	0	0	0	3	1	0	0	0	
	Feb	81	59	8	12	2	0	0	0	0	0	1	1	0	0	0	
	Mar	134	87	27	18	0	0	0	0	0	0	1	0	1	0	0	
	Apr	149	104	23	12	1	0	0	0	3	1	2	2	0	1	0	
	May	259	133	52	51	8	3	0	0	0	0	5	3	3	1	0	
	Jun	301	147	34	62	23	11	0	0	0	0	0	1	14	9	0	
	Jul	180	81	35	46	4	0	0	0	1	2	0	0	5	6	0	
	Aug	231	145	29	34	11	0	0	0	4	2	3	3	0	0	0	
	Sep	178	111	23	32	8	0	0	0	0	0	2	1	1	0	0	
	Oct	183	119	37	23	0	0	0	0	0	0	0	4	0	0	0	
	Nov	172	69	56	33	9	1	0	0	1	1	0	0	1	1	0	
	Dec	271	174	40	44	5	0	0	1	2	3	0	0	1	1	0	
	Total	2250	1318	366	380	72	15	0	1	11	9	17	12	30	19	0	
Ave./Mon	187.5	109.8	30.5	31.7	6.0	1.3	-	-	0.9	0.8	1.4	1.0	2.5	1.6	-		

Year	Month	Type of vehicle																
		Total	Car			Bus			Truck <1 ton		Truck 1-3 ton		Truck 3-5 ton		Truck 5-10 ton		Truck 10-13 ton	
			4 seats	9 seats	9-24	24-32	32 seats	with good	non goods	with good	non goods	with good	non goods	with good	non goods	with good	non goods	
2007	Jan	150	91	32	17	2	0	3	3	0	0	0	0	0	1	1	0	0
	Feb	151	97	27	24	2	0	0	0	2	2	1	1	0	0	0	0	0
	Mar	161	93	28	24	4	3	0	0	3	2	0	0	2	2	0	0	0
	Apr	221	140	35	35	11	6	0	0	1	3	1	1	0	0	0	0	0
	May	185	107	34	29	5	0	1	0	4	3	1	1	0	0	0	0	0
	Jun	255	103	57	67	21	5	0	0	1	1	0	0	0	0	0	0	0
	Jul	287	106	68	78	14	11	0	0	4	5	0	0	1	0	0	0	0
	Aug	199	82	40	58	9	5	0	0	5	0	0	0	0	0	0	0	0
	Sep	273	94	85	60	5	0	0	0	22	0	2	0	5	0	0	0	0
	Oct	152	51	46	35	5	0	0	0	0	0	4	5	2	0	4	0	0
	Nov	137	48	40	36	5	0	0	0	0	0	4	0	4	0	0	0	0
	Dec	152	70	43	23			0	0	0	1	0	13	0	0	0	2	0
	Total	2323	1072	530	486	83	30	4	3	43	14	26	8	15	3	6	0	0
Ave./Mon	193.6	89.3	44.2	40.5	7.5	2.5	0.3	0.3	3.6	1.2	2.2	0.7	1.3	0.3	0.5	-	-	
2008	Jan	158	66	32	45	8	0	0	2	0	5	0	0	0	0	0	0	
	Feb	154	63	34	41	9	0	0	0	0	7	0	0	0	0	0	0	
	Mar	178	61	39	50	7	4	0	5	0	8	0	4	0	0	0	0	
	Apr	148	65	23	40	8	0	0	6	0	1	0	3	0	0	0	0	
	May	146	56	29	42	9	9	0	0	0	1	0	0	0	0	0	0	
	Jun	143	54	27	49	14	2	0	1	0	0	0	0	0	0	0	0	
	Jul	181	58	41	43	18	13	0	5	0	3	0	0	0	0	0	0	
	Aug	154	63	34	41	9	0	0	0	0	7	0	0	0	0	0	0	
	Sep	179	61	39	50	8	4	0	5	0	8	0	4	0	0	0	0	
	Oct	100	22	29	27	13	0	0	5	0	0	0	2	2	0	0	0	
	Nov	135	32	37	40	10	2	0	2	0	4	0	4	4	0	0	0	
	Dec	94	28	14	36	11	0	2	0	0	0	2	1	0	0	0	0	
	Total	1770	629	376	504	124	34	2	31	0	44	2	18	6	0	0	0	
Ave./Mon	147.5	52.4	31.3	42.0	10.3	2.8	0.2	2.6	-	3.7	0.2	1.5	0.5	-	-	-		
2009	Jan	69	28	19	16	1	0	0	0	2	0	1	0	2	0	0		
	Feb	42	16	6	17	0	1	0	0	0	2	0	0	0	0	0		
	Mar	97	38	17	34	4	0	0	0	3	0	1	0	0	0	0		
	Apr	101	25	35	26	12	0	0	0	3	0	0	0	0	0	0		
	May	116	27	38	36	12	1	0	0	0	2	0	0	0	0	0		
	Jun	146	37	30	44	13	10	0	0	10	0	2	0	0	0	0		
	Jul	196	42	40	23	4	0	0	0	3	0	2	0	0	0	0		
	Aug	90	37	28	20	2	0	0	0	2	0	1	0	0	0	0		
	Sep	44	8	11	9	0	0	0	0	0	0	2	0	14	0	0		
	Oct	106	36	32	27	1	0	0	0	0	0	10	0	0	0	0		
	Nov	143	62	42	30			0	0	5	0	2	0	2	0	0		
	Dec	77	23	29	23			0	0	3	0	0	0	0	0	0		
	Total	1227	379	369	321	68	16	0	0	31	0	25	0	18	0	0		
Ave./Mon	102.3	31.6	30.8	26.8	6.8	1.3	-	-	2.6	-	2.1	-	1.5	-	-			

4.6. The total number of vehicles priority (Cat Hai – Cat Ba Ferry)

Year	Month	Type of vehicle															
		Total	Car 4 seats	Car 9 seats	Bus 9<24	Bus 24<32	Bus more 32 seats	Truck <1 ton with good	Truck <1 ton non goods	Truck 1-3 ton with good	Truck 1-3 ton non goods	Truck 3-5 ton with good	Truck 3-5 ton non goods	Truck 5-10 ton with good	Truck 5-10 ton non goods	Truck 10-13 ton with good	Truck 10-13 ton non goods
2002	Jan.																
	Feb.																
	Mar.																
	Apr.																
	May																
	Jun.	585	368	60	119	34	2	0	0	2	0	0	0	0	0	0	
	Jul.	666	434	104	114	14	0	0	0	0	0	0	0	0	0	0	
	Aug.	393	213	64	81	19	12	0	0	4	0	0	0	0	0	0	
	Sep.	210	143	12	44	2	0	0	0	0	2	5	2	0	0	0	
	Oct.	296	191	29	56	12	3	0	0	2	0	3	0	0	0	0	
	Nov.	292	202	49	35	6	0	0	0	0	0	0	0	0	0	0	
	Dec.	171	107	10	39	2	8	0	0	0	2	0	0	0	1	0	
	Total	2613	1658	328	488	89	25	0	0	8	2	5	5	2	3	0	
Ave./Mon	373.3	236.9	46.9	69.7	12.7	3.6	-	-	1.1	0.3	0.7	0.7	0.3	0.4	-		
2003	Jan.	316	168	28	120	0	0	0	0	0	0	0	0	0	0		
	Feb.	284	150	28	98	2	0	0	0	0	0	0	0	0	0		
	Mar.	164	116	10	38	0	0	0	0	0	0	0	0	0	0		
	Apr.	131	99	11	21	0	0	0	0	0	0	0	0	0	0		
	May	179	126	22	30	0	0	0	0	0	0	0	1	0	0		
	Jun.	207	137	38	21	10	1	0	0	0	0	0	0	0	0		
	Jul.	571	290	44	147	51	2	0	0	8	0	17	1	11	0		
	Aug.	237	133	39	46	7	5	0	0	0	0	5	2	0	0		
	Sep.	158	109	12	31	3	0	0	0	0	0	0	0	3	0		
	Oct.	162	104	10	44	2	2	0	0	0	0	0	0	0	0		
	Nov.	101	70	7	23	1	0	0	0	0	0	0	0	0	0		
	Dec.	124	70	20	30	4	0	0	0	0	0	0	0	0	0		
	Total	2634	1578	269	649	80	10	0	0	8	0	22	3	15	0		
Ave./Mon	219.5	131.5	22.4	54.1	6.7	0.8	-	-	0.7	-	1.8	0.3	1.3	-			
2004	Jan.	70	57	7	2	0	0	0	0	2	0	1	1	0	0		
	Feb.	136	108	15	12	1	0	0	0	0	0	0	0	0	0		
	Mar.	486	328	35	47	25	22	1	0	13	0	10	0	2	3		
	Apr.	132	99	8	22	1	2	0	0	0	0	0	0	0	0		
	May	168	128	16	14	8	1	0	0	1	0	0	0	0	0		
	Jun.	255	203	10	26	5	7	1	0	2	0	0	0	1	0		
	Jul.	339	191	28	79	25	12	2	0	0	0	0	0	2	0		
	Aug.	255	150	26	36	23	6	0	0	1	0	6	7	0	0		
	Sep.	103	86	4	8	1	1	0	0	1	0	2	0	0	0		
	Oct.	119	80	7	21	7	0	0	0	0	0	0	0	4	0		
	Nov.	72	58	5	1	4	0	0	0	0	0	0	0	4	0		
	Dec.	137	116	3	8	6	0	0	0	0	0	0	0	4	0		
	Total	2272	1604	164	276	106	51	4	0	17	3	18	8	14	7		
Ave./Mon	189.3	133.7	13.7	23.0	8.8	4.3	0.3	-	1.4	0.5	1.5	0.7	1.2	0.6			
2005	Jan.	111	86	4	17	0	0	0	0	0	2	0	2	0	0		
	Feb.	98	84	5	7	0	0	0	0	2	0	0	0	0	0		
	Mar.	178	138	7	25	2	2	0	0	0	0	4	0	0	0		
	Apr.	179	144	11	16	2	0	0	0	2	0	2	0	2	0		
	May	141	115	0	24	0	0	0	0	0	0	0	2	0	0		
	Jun.	316	233	29	25	12	9	0	0	3	0	0	0	5	0		
	Jul.	235	146	27	49	11	2	0	0	0	0	0	0	0	0		
	Aug.	67	44	7	14	2	0	0	0	0	0	0	0	0	0		
	Sep.	61	38	7	12	2	2	0	0	0	0	0	0	0	0		
	Oct.	31	28	0	3	0	0	0	0	0	0	0	0	0	0		
	Nov.	37	28	1	4	0	0	0	0	2	2	0	0	0	0		
	Dec.	40	33	3	4	0	0	0	0	0	2	4	4	11	0		
	Total	1494	1117	101	200	31	15	0	0	18	4	8	8	22	0		
Ave./Mon	124.5	93.1	8.4	16.7	2.6	1.3	-	-	1.5	0.6	0.7	0.7	1.8	-			
2006	Jan.	47	40	1	5	0	0	0	0	0	0	0	1	0	0		
	Feb.	50	44	3	3	0	0	0	0	0	0	0	0	0	0		
	Mar.	83	59	8	9	0	0	0	0	2	0	2	3	0	0		
	Apr.	96	74	1	17	0	0	0	0	0	0	2	0	0	0		
	May	169	130	7	28	2	2	0	0	0	0	0	0	0	0		
	Jun.	196	122	7	34	19	6	0	0	0	0	1	0	4	3		
	Jul.	76	46	13	16	1	0	0	0	0	0	0	0	0	0		
	Aug.	86	65	9	8	4	0	0	0	0	0	0	0	0	0		
	Sep.	146	86	16	32	9	0	0	0	0	2	0	1	0	0		
	Oct.	125	84	23	16	0	0	0	0	0	0	0	0	0	0		
	Nov.	114	67	16	18	8	0	0	0	3	0	0	0	0	2		
	Dec.	102	66	13	17	6	0	0	0	0	0	0	0	0	0		
	Total	1290	883	117	203	49	8	0	0	5	0	7	2	10	3		
Ave./Mon	107.5	73.6	9.8	16.9	4.1	0.7	-	-	0.4	-	0.6	0.2	0.8	0.3			

The Preparatory Survey on Lach Huyen Port Infrastructure Construction Project (Road and Bridge) in Vietnam
 FINAL REPORT-Appendix 2: Traffic Data July 2010

Year	Month	Type of vehicle														
		Total	Car 4 seats	Car <9 seats	Bus 9-24	Bus 24-32	Bus more 32 seats	Truck <1 ton		Truck 1-3 ton		Truck 3-5 ton		Truck 5-10 ton		Truck 10-13 ton
							with good	non goods	with good	non goods	with good	non goods	with good	non goods	with good	non goods
2007	Jan.	86	53	12	9	0	0	0	0	0	6	0	6	0	0	0
	Feb.	94	62	5	6	1	0	0	0	2	0	16	0	2	0	0
	Mar.	111	82	9	10	4	0	0	0	0	2	0	4	0	0	0
	Apr.	162	115	15	18	6	7	0	0	0	1	0	0	0	0	0
	May	178	127	18	21	2	0	0	0	2	0	8	0	0	0	0
	Jun.	232	129	35	46	13	6	0	0	2	0	1	0	0	0	0
	Jul.	374	170	66	91	22	16	0	0	7	0	2	0	0	0	0
	Aug.	313	103	90	81	18	7	0	0	8	4	1	1	0	0	0
	Sep.	89	45	19	17	3	0	0	0	0	0	5	0	0	0	0
	Oct.	185	83	43	32	0	0	0	0	19	0	0	0	6	0	2
	Nov.	179	80	57	28	1	0	0	0	8	0	4	0	1	0	0
	Dec.	192	64	71	26	0	0	0	0	23	0	6	0	2	0	0
	Total	2195	1113	440	385	70	36	0	0	77	4	52	1	15	0	2
Ave./Mon	182.9	92.8	36.7	32.1	5.8	3.0	-	-	6.4	0.6	4.3	0.1	1.3	-	0.3	
2008	Jan.	124	48	53	13	0	0	0	0	1	0	3	0	6	0	
	Feb.	91	32	47	6	0	0	0	0	0	3	3	0	0	0	
	Mar.	183	69	85	14	5	0	0	0	0	0	6	0	4	0	
	Apr.	239	101	63	61	4	0	0	0	1	0	2	0	3	0	
	May	231	63	90	57	12	4	0	0	0	4	1	0	0	0	
	Jun.	359	76	143	83	42	7	0	0	3	4	3	0	0	0	
	Jul.	478	108	162	144	45	11	0	0	0	0	2	1	4	1	
	Aug.	183	69	85	14	5	0	0	0	0	0	6	0	4	0	
	Sep.	178	51	81	39	3	0	0	0	0	0	0	0	2	0	
	Oct.	147	30	74	38	2	0	0	0	1	0	2	0	0	0	
	Nov.	166	47	69	33	6	0	0	0	0	0	5	1	4	1	
	Dec.	173	61	62	32	2	0	0	0	0	0	10	1	2	1	
	Total	2552	761	1016	534	126	22	0	0	6	4	44	7	29	3	
Ave./Mon	212.7	63.4	84.7	44.5	10.5	1.8	-	-	0.5	0.6	3.7	0.6	2.4	0.3		
2009	Jan.	118	26	68	11	0	0	0	0	6	5	0	0	2		
	Feb.	124	34	74	16	0	0	0	0	0	0	0	0	0		
	Mar.	148	34	79	24	2	0	6	1	0	0	0	0	2		
	Apr.	186	35	95	38	2	0	0	0	16	0	0	0	0		
	May	172	53	71	35	4	0	0	0	9	0	0	0	0		
	Jun.	167	49	67	49	2	0	0	0	0	0	0	0	0		
	Jul.	193	83	70	30	2	0	0	0	7	1	0	0	0		
	Aug.	99	40	53	6	0	0	0	0	0	0	0	0	0		
	Sep.	106	35	42	5	0	0	0	0	10	0	0	0	7		
	Oct.	98	38	47	9	0	0	0	0	4	0	0	0	0		
	Nov.	76	33	32	7	0	0	0	0	4	0	0	0	0		
	Dec.	82	19	45	12	0	0	0	0	1	5	0	0	0		
	Total	1560	479	743	242	12	0	6	1	57	11	0	0	11		
Ave./Mon	130.8	39.9	61.9	20.2	1.0	-	0.5	0.2	4.8	1.7	-	-	0.9			

APPENDIX 2 -2: TRAFFIC DEMAND FORECAST CALCULATION

1. Summary of Peak Hour Trip Generation (pcu/hr)

Position	Year	AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
		(outbound)	(inbound)	(outbound)	(inbound)
Dinh Vu	2015	349	394	200	198
	2020	654	706	353	379
	2030	2,138	2,618	1,141	1,770

Position	Year	AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
		(outbound)	(inbound)	(outbound)	(inbound)
Cat Hai	2015	792	307	307	792
	2020	1,309	686	686	1,309
	2030	1,846	1,300	1,300	1,846

Position	Year	AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
		(outbound)	(inbound)	(outbound)	(inbound)
Cat Ba	2015	135	43	43	135
	2020	185	59	59	185
	2030	156	50	50	156

2. Summary of Future Traffic Demands

Section	Peak Hour	Direction	Year			
			2015	2020	2025	2030
Tan Vu IC - Dinh Vu	AM	To Tan Vu Interchange	1,276	2,149	3,145	4,140
		From Tan Vu Interchange	745	1,451	2,709	3,967
	PM	To Tan Vu Interchange	550	1,098	1,794	2,490
		From Tan Vu Interchange	1,125	1,874	2,823	3,772
Dinh Vu - Cat Hai	AM	Cat Hai to Dinh Vu	927	1,494	1,748	2,002
		Dinh Vu to Cat Hai	351	745	1,047	1,350
Cat Hai	PM	Cat Hai to Dinh Vu	351	745	1,047	1,350
		Dinh Vu to Cat Hai	927	1,494	1,748	2,002

3. Forecasted Traffic Demands on Dinh Vu Industrial Zone

No.	Item	Amount		Trip Generation Rate				Trip Generation (pcu/hr)			
				AM		PM		AM		PM	
				Generation	Attraction	Generation	Attraction	Generation	Attraction	Generation	Attraction
I	Industrial Zone	(100m ²)	(100m ²)	(pcu/hr/100m ²)		(pcu/hr/100m ²)		(pcu/hr)		(pcu/hr)	
		16,375	4,913	0.110	0.150	0.060	0.040	238	324	130	86
		16375*30%						4913*0.11+0.44	4913*0.15+0.44	4913*0.06+0.44	4913*0.04+0.44
II	Dinh Vu Port Area	(tons /yr)	(tons /yr)	(pcu/ton)		(pcu/ton)		(pcu/ton)		(pcu/ton)	
		4,500,000	616	0.082	0.082	0.082	0.082	51	51	51	51
		4500000/365*5%						616*0.082	616*0.082	616*0.082	616*0.082
III	Appartment block for resident	(m ²)	(units)	(pcu/hr/unit)		(pcu/hr/unit)		(pcu/hr)		(pcu/hr)	
		162,500	405	0.250	0.080	0.080	0.250	61	19	19	61
		162500/1000*50%*5						405*0.25+0.6	405*0.08+0.6	405*0.08+0.6	405*0.25+0.6
TOTAL								348	384	200	198

No.	Item	Amount		Trip Generation Rate				Trip Generation (pcu/hr)			
				AM		PM		AM		PM	
				Generation	Attraction	Generation	Attraction	Generation	Attraction	Generation	Attraction
I	Industrial Zone	(100m ²)	(100m ²)	(pcu/hr/100m ²)		(pcu/hr/100m ²)		(pcu/hr)		(pcu/hr)	
		32,750	9,825	0.110	0.150	0.060	0.040	432	590	236	157
		32750*30%						8825*0.11+0.4	8825*0.15+0.4	8825*0.06+0.4	8825*0.04+0.4
II	Dinh Vu Port Area	(tons /yr)	(tons /yr)	(pcu/ton)		(pcu/ton)		(pcu/ton)		(pcu/ton)	
		6,000,000	822	0.082	0.082	0.082	0.082	67	67	67	67
		6000000/365*5%						822*0.082	822*0.082	822*0.082	822*0.082
III	Appartment block for resident	(m ²)	(units)	(pcu/hr/unit)		(pcu/hr/unit)		(pcu/hr)		(pcu/hr)	
		325,000	813	0.250	0.080	0.080	0.250	154	40	40	154
		325000/1000*50%*5						813*0.25+0.76	813*0.08+0.76	813*0.08+0.76	813*0.25+0.76
TOTAL								654	706	353	379

No.	Item	Amount		Trip Generation Rate				Trip Generation (pcu/hr)			
				AM		PM		AM		PM	
				Generation	Attraction	Generation	Attraction	Generation	Attraction	Generation	Attraction
I	Industrial Zone	(100m ²)	(100m ²)	(pcu/hr/100m ²)		(pcu/hr/100m ²)		(pcu/hr)		(pcu/hr)	
		97,680	29,304	0.110	0.150	0.060	0.040	1,805	2,462	885	656
		97680*30%						29304*0.11+0.56	29304*0.15+0.56	29304*0.06+0.56	29304*0.04+0.56
II	Dinh Vu Port Area	(tons /yr)	(tons /yr)	(pcu/ton)		(pcu/ton)		(pcu/ton)		(pcu/ton)	
		10,000,000	890	0.082	0.082	0.082	0.082	73	73	73	73
		10000000/365*0.65*5%						890*0.082	890*0.082	890*0.082	890*0.082
III	Appartment block for resident	(m ²)	(units)	(pcu/hr/unit)		(pcu/hr/unit)		(pcu/hr)		(pcu/hr)	
		850,000	1,825	0.250	0.080	0.080	0.250	260	83	83	1,040
		850000/1000*90%*5						1825*0.25+0.84	1825*0.08+0.84	1825*0.08+0.84	1825*0.25+0.84
TOTAL								2,138	2,618	1,141	1,770

4. Forecasted Traffic Demands on Cat Hai Island

Cat Hai Island 2015 (Without Railway)

No.	Item	Amount		Trip Generation Rate				Trip Generation (pcu/hr)			
				AM		PM		AM		PM	
				Generation	Attraction	Generation	Attraction	Generation	Attraction	Generation	Attraction
I	Population	(100m ²)	(100m ²)	(pcu/hr/100m ²)		(pcu/hr/100m ²)		(pcu/hr)		(pcu/hr)	
		19,000	4,750	0.250	0.080	0.080	0.250	713	228	228	713
		19000*1/4						4750*0.25*0.6	4750*0.08*0.6	4750*0.08*0.6	4750*0.25*0.6
II	Lach Huyen Port Area	(tons /yr)	(tons /yr)	(pcu/ton)		(pcu/ton)		(pcu/ton)		(pcu/ton)	
		5,384,000	739	0.082	0.082	0.082	0.082	61	61	61	61
		5384000/385*0.05						739*0.082	739*0.082	739*0.082	739*0.082
III	Tourists	(m ²)	(units)	(pcu/hr/unit)		(pcu/hr/unit)		(pcu/hr)		(pcu/hr)	
		500,000	62	0.400	0.400	0.400	0.400	19	19	19	19
		500000/365*0.76*0.06						62*0.4*0.76	62*0.4*0.76	62*0.4*0.76	62*0.4*0.76
TOTAL								792	307	307	792

Cat Hai Island 2020 (Without Railway)

No.	Item	Amount		Trip Generation Rate				Trip Generation (pcu/hr)			
				AM		PM		AM		PM	
				Generation	Attraction	Generation	Attraction	Generation	Attraction	Generation	Attraction
I	Population	(100m ²)	(100m ²)	(pcu/hr/100m ²)		(pcu/hr/100m ²)		(pcu/hr)		(pcu/hr)	
		19,300	4,825	0.250	0.080	0.080	0.250	917	293	293	917
		19300*1/4						4825*0.25*0.70	4825*0.08*0.70	4825*0.08*0.70	4825*0.25*0.70
II	Lach Huyen Port Area	(tons /yr)	(tons /yr)	(pcu/ton)		(pcu/ton)		(pcu/ton)		(pcu/ton)	
		29,525,000	4,045	0.082	0.082	0.082	0.082	332	332	332	332
		29525000/365*0.05						4045*0.082	4045*0.082	4045*0.082	4045*0.082
III	Tourists	(m ²)	(units)	(pcu/hr/unit)		(pcu/hr/unit)		(pcu/hr)		(pcu/hr)	
		1,600,000	200	0.400	0.400	0.400	0.400	61	61	61	61
		1600000/365*0.76*0.06						200*0.4*0.76	200*0.4*0.76	200*0.4*0.76	200*0.4*0.76
TOTAL								1,309	688	688	1,309

Cat Hai Island Zone 2030 (With Railway)

No.	Item	Amount		Trip Generation Rate				Trip Generation (pcu/hr)			
				AM		PM		AM		PM	
				Generation	Attraction	Generation	Attraction	Generation	Attraction	Generation	Attraction
I	Population	(100m ²)	(100m ²)	(pcu/hr/100m ²)		(pcu/hr/100m ²)		(pcu/hr)		(pcu/hr)	
		20,100	5,025	0.250	0.080	0.080	0.250	804	257	257	804
		20100*1/4						5025*0.25*0.64	5025*0.08*0.64	5025*0.08*0.64	5025*0.25*0.64
II	Lach Huyen Port Area	(tons /yr)	(tons /yr)	(pcu/ton)		(pcu/ton)		(pcu/ton)		(pcu/ton)	
		120,000,000	11,507	0.082	0.082	0.082	0.082	944	944	944	944
		120000000/385*0.7*0.05						11507*0.082	11507*0.082	11507*0.082	11507*0.082
III	Tourists	(m ²)	(units)	(pcu/hr/unit)		(pcu/hr/unit)		(pcu/hr)		(pcu/hr)	
		2,600,000	325	0.400	0.400	0.400	0.400	99	99	99	99
		2600000/365*0.76*0.05						325*0.4*0.76	325*0.4*0.76	325*0.4*0.76	325*0.4*0.76
TOTAL								1,846	1,300	1,300	1,846

5. Forecasted Traffic Demands on Cat Ba Island

Cat Ba Island 2015 (Without Railway)

No.	Item	Amount		Trip Generation Rate				Trip Generation (pcu/hr)			
				AM		PM		AM		PM	
				Generation	Attraction	Generation	Attraction	Generation	Attraction	Generation	Attraction
I	Population	(100m ²)	(100m ²)	(pcu/hr/100m ²)		(pcu/hr/100m ²)		(pcu/hr)		(pcu/hr)	
		12,000	900	0.250	0.080	0.080	0.250	135	43	43	135
		12000/4*0.3						900*0.25*0.6	900*0.08*0.6	900*0.08*0.6	900*0.25*0.6
III	Tourists	(m2)	(units)	(pcu/hr/unit)		(pcu/hr/unit)		(pcu/hr)		(pcu/hr)	
		500,000	----	0.400	0.400	0.400	0.400	0	0	0	0
TOTAL								135	43	43	135

Cat Ba Island 2020 (Without Railway)

No.	Item	Amount		Trip Generation Rate				Trip Generation (pcu/hr)			
				AM		PM		AM		PM	
				Generation	Attraction	Generation	Attraction	Generation	Attraction	Generation	Attraction
I	Population	(100m ²)	(100m ²)	(pcu/hr/100m ²)		(pcu/hr/100m ²)		(pcu/hr)		(pcu/hr)	
		13,000	975	0.250	0.080	0.080	0.250	185	59	59	185
		13000/4*0.3						975*0.25*0.76	975*0.08*0.76	975*0.08*0.76	975*0.25*0.76
III	Tourists	(m2)	(units)	(pcu/hr/unit)		(pcu/hr/unit)		(pcu/hr)		(pcu/hr)	
		348,700	----	0.400	0.400	0.400	0.400	0	0	0	0
TOTAL								185	59	59	185

Cat Ba Island 2030 (With Railway)

No.	Item	Amount		Trip Generation Rate				Trip Generation (pcu/hr)			
				AM		PM		AM		PM	
				Generation	Attraction	Generation	Attraction	Generation	Attraction	Generation	Attraction
I	Population	(100m ²)	(100m ²)	(pcu/hr/100m ²)		(pcu/hr/100m ²)		(pcu/hr)		(pcu/hr)	
		13,000	975	0.250	0.080	0.080	0.250	156	50	50	156
		13000/4*0.3						975*0.25*0.64	975*0.08*0.64	975*0.08*0.64	975*0.25*0.64
III	Tourists	(m2)	(units)	(pcu/hr/unit)		(pcu/hr/unit)		(pcu/hr)		(pcu/hr)	
		2,000,000	----	0.400	0.400	0.400	0.400	0	0	0	0
TOTAL								156	50	50	156

6. Revised FS Daily Traffic Volume (Tan Vu – Dinh Vu)

Year	Unit: passenger/hour											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tan Vu Interchange	15,526	18,831	22,624	28,408	34,491	41,434	49,344	58,244	68,144	79,044	90,944	103,844
Bicycle	288	296	322	348	387	432	483	540	603	672	747	828
Motorcycle	623	678	723	761	794	816	829	835	831	818	800	785
Car	125	168	218	274	336	404	481	568	666	774	892	1,020
Trucks of 2 axes and mini bus with less than 25 seats	116	129	150	169	191	215	244	275	308	342	377	415
Truck of more than 3 axes and large bus	138	167	198	248	266	305	371	441	519	604	695	789
Trailer and bus with trailer	13	15	16	18	20	21	26	28	33	35	41	43
Total	1277	1451	1627	1798	1974	2148	2320	2477	2746	2945	3148	3344
The percent of heavy vehicles	25.9%	26.9%	27.9%	28.7%	29.7%	30.7%	32.7%	34.5%	36.5%	38.2%	40.0%	41.5%

Year	Unit: vehicle/day											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tan Vu Interchange	245	289	339	419	499	599	709	839	989	1,159	1,349	1,559
Bicycle	156	181	204	224	244	261	284	301	311	315	312	302
Motorcycle	364	413	457	494	527	553	573	579	575	566	556	549
Car	73	103	136	178	223	273	339	411	485	568	656	749
Trucks of 2 axes and mini bus with less than 25 seats	64	79	95	110	127	145	177	211	247	285	325	367
Truck of more than 3 axes and large bus	86	102	125	150	177	206	269	338	417	504	599	699
Trailer and bus with trailer	7	9	10	12	13	15	19	22	26	29	35	38
Total	744	887	1029	1168	1311	1452	1704	1956	2205	2458	2713	2960
The percent of heavy vehicles	25.7%	26.9%	27.9%	28.8%	29.7%	30.7%	32.7%	34.5%	36.4%	38.2%	39.9%	41.5%

Revised FS Daily Traffic Volume: Tan Vu-Dinh Vu

Year	Unit: vehicle/day											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bicycle	42,400	47,700	52,600	57,000	61,000	64,800	67,600	69,200	69,200	68,200	67,400	66,400
Motorcycle	65,800	71,600	76,600	81,600	86,200	90,200	93,200	95,200	96,200	96,200	95,200	94,200
Car	3,900	5,400	7,100	9,000	11,100	13,400	16,100	19,200	22,800	26,800	31,200	36,000
Trucks of 2 axes and mini bus with less than 25 seats	1,245	1,486	1,750	1,993	2,271	2,571	3,007	3,471	3,944	4,479	5,014	5,586
Truck of more than 3 axes and large bus	1,246	1,517	1,846	2,171	2,531	2,920	3,457	4,051	4,749	5,494	6,289	7,134
Trailer and bus with trailer	71	86	93	107	118	129	161	179	211	229	269	308
Total	114,720	128,629	143,076	153,978	165,267	175,160	188,278	199,588	208,704	216,123	221,619	225,784
The percent of heavy vehicles	3.5%	3.8%	4.1%	4.4%	4.7%	5.1%	5.7%	6.2%	6.8%	7.5%	8.2%	8.9%

PCU Daily Traffic Volume: Tan Vu-Dinh Vu

Year	Unit: PCU/day											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bicycle	8,480	9,540	10,520	11,400	12,200	12,960	13,520	13,840	13,960	13,960	13,840	13,600
Motorcycle	19,740	21,780	23,640	25,100	26,420	27,540	28,300	28,760	28,920	28,920	28,800	28,600
Car	3,960	5,420	7,120	9,040	11,100	13,540	16,120	19,200	22,800	26,800	31,200	36,000
Trucks of 2 axes and mini bus with less than 25 seats	2,486	2,972	3,500	3,986	4,542	5,142	6,014	6,942	7,928	8,956	10,028	11,172
Truck of more than 3 axes and large bus	3,115	3,843	4,615	5,428	6,328	7,300	8,443	9,743	11,228	12,973	14,828	16,789
Trailer and bus with trailer	294	344	372	428	472	516	644	716	844	916	1,084	1,264
Total	38,065	43,899	49,727	55,382	61,162	66,818	72,761	78,916	85,248	91,744	98,428	105,289