

APPENDIX B- 9	Cargo Vehicle O/D, Susana Heights Station	183
APPENDIX B-10	Cargo Vehicle O/D, McArthur Highway Station	185
APPENDIX B-11	Cargo Vehicle O/D, North Diversion Road	187
APPENDIX B-12	Commodity O/D, Susana Heights Station	189
APPENDIX B-13	Commodity O/D, McArthur Highway Station	191
APPENDIX B-14	Commodity O/D, North Diversion Road	193
APPENDIX B-15	FORM 3 COMPANY SURVEY FORM	195
APPENDIX B-16	List of Companies and Corporations Sampled	199
APPENDIX B-17	Reasons Given for the Assessment of "Serious Problem" and "Poses a Problem" in Goods Transportation by Top Corporations	200
APPENDIX B-18	Reasons for the Assessment of "Serious Problem" and "Poses a Problem" in Goods Transportation by Shipping Companies	204
APPENDIX B-19	PCU from/to Port	206
APPENDIX B-20	Volume from/to Port in 1990	207
APPENDIX B-21	Volume from/to Port in 2010 (M1)	208
APPENDIX B-22	Volume from/to Port in 2010 (M1)	209
APPENDIX B-23	Volume from/to Port in 2010 (M2)	210
APPENDIX B-24	Volume from/to Port in 2010 (M2)	211
APPENDIX B-25	Volume from/to Port in 2010 (H1)	212
APPENDIX B-26	Volume from/to Port in 2010 (H1)	213
APPENDIX B-27	Speed from/to Port in 2010 (M1)	214
APPENDIX B-28	Speed from/to Port in 2010 (M1)	215
APPENDIX B-29	Speed from/to Port in 2010 (M2)	216
APPENDIX B-30	Speed from/to Port in 2010 (M2)	217
APPENDIX B-31	Speed from/to Port in 2010 (H1)	218
APPENDIX B-32	Speed from/to Port in 2010 (H1)	219
APPENDIX B-33	Links of Speed down and Volume up Year 2010 Medium Case 1	220
APPENDIX B-34	Links of Speed down and Volume up Year 2010 Medium Case 2	221
APPENDIX B-35	Links of Speed down and Volume up Year 2010 High Case 1	222
APPENDIX B-36	Design Traffic Volume	223

APPENDIX C Vessel Calls

APPENDIX C- 1	Classified number of Vessel Size at Port of Manila	225
APPENDIX C- 2	List of CISO Member's Vessel	232
APPENDIX C- 3	List of Foreign Container Vessel	234

APPENDIX D Basic Data for Berth Requirement

APPENDIX D- 1	Productivity of Container handling at South Harbor and MICT	236
APPENDIX D- 2	Ratio of Each Size Container at North Harbor in TEU	236
APPENDIX D- 3	Present Data for Caluculation	237
APPENDIX D- 4	Ratio of Cargo Volume by Vessel Type	240
APPENDIX D- 5	Ratio of Loaded Container and Weight per Container	242
APPENDIX D- 6	Data for Short-Term Plan (Medium Case)	243

APPENDIX E

APPENDIX E- 1	Project Cost of Manila South Harbor (medium case)	248
APPENDIX E- 2	Project Cost of MICT (medium case)	249
APPENDIX E- 3	Project Cost of Manila North Harbor (medium case)	250
APPENDIX E- 4	Project Cost of Batangas Port (medium case)	251
APPENDIX E- 5	Project Cost of Manila South Harbor (high case)	252
APPENDIX E- 6	Project Cost of MICT (high case)	253
APPENDIX E- 7	Project Cost of Manila North Harbor (high case)	254
APPENDIX E- 8	Project Cost of Batangas Port (high case)	255
APPENDIX E- 9	Project Cost of NAIC/CAVITE (high case Alternative)	256
APPENDIX E-10	Project Cost of Sangley Point (high case Alternative)	257

APPENDIX F Demand Forecast

APPENDIX F- 1	Table 2-3 (Continued)	258
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PART I

APPENDIX A: Origin and Destination Survey

Appendix A-1 Hourly vehicle count at Port of Manila
Hourly Vehicle Count at North Harbor
(June 1 to June 7, 1993)

Hourly Vol.	Incoming Vehicle Type										Total	Outgoing Vehicle Type										Total
	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10	
100	15	23	12	0	39	72	25	1	2	100	289	21	34	26	3	32	75	24	0	75	290	
200	23	24	23	0	59	40	31	1	0	134	335	19	37	8	0	25	83	24	3	0	282	
300	26	24	17	0	27	57	31	7	0	102	293	21	19	12	1	14	67	21	3	0	117	
400	44	24	23	0	74	53	29	2	0	176	425	28	25	10	0	13	45	18	3	1	302	
500	99	40	15	0	51	38	25	0	1	277	546	68	35	12	1	21	56	6	2	3	526	
600	268	76	18	0	11	14	3	1	4	647	1042	351	67	22	2	24	34	9	2	8	1362	
700	152	69	27	0	11	12	5	0	4	449	729	241	92	32	0	14	21	9	1	4	1139	
800	272	122	49	11	86	51	39	2	22	973	1627	368	132	86	10	89	78	28	8	17	2001	
900	238	151	71	11	111	71	65	4	14	919	1655	484	158	136	22	138	180	52	6	13	2370	
1000	284	167	81	10	124	62	76	7	14	790	1615	441	241	167	24	164	204	57	4	18	2465	
1100	250	182	114	2	128	90	66	4	14	787	1637	465	260	157	26	209	186	45	13	23	2357	
1200	220	117	94	4	96	49	27	6	4	626	1243	273	123	60	6	82	45	26	5	5	1408	
1300	301	149	104	8	117	94	55	8	19	790	1645	329	190	100	4	179	117	63	7	12	1830	
1400	244	143	100	10	128	121	80	3	16	852	1697	335	269	175	13	190	156	168	17	13	2265	
1500	221	166	88	12	124	106	83	8	13	812	1693	341	206	130	9	147	103	105	9	20	2040	
1600	214	133	110	5	158	98	81	2	20	821	1642	337	213	195	5	185	129	157	7	24	2241	
1700	145	59	64	0	63	92	40	6	3	577	1049	174	112	138	2	75	92	103	3	12	1530	
1800	153	58	41	1	52	77	28	7	7	548	972	198	120	78	2	64	75	77	6	2	1208	
1900	82	32	36	0	28	57	15	1	3	299	553	140	61	82	0	46	46	52	2	1	820	
2000	92	50	51	0	52	95	44	2	3	298	607	121	78	46	2	62	94	69	4	2	853	
2100	62	40	53	2	51	134	25	2	4	242	615	84	57	74	3	65	94	50	3	3	732	
2200	50	36	29	0	58	113	72	2	0	244	604	95	46	36	2	81	176	20	8	0	777	
2300	30	33	17	0	37	91	52	3	6	161	430	46	54	33	0	50	243	29	2	0	590	
2400	23	29	10	0	24	64	41	2	2	109	304	26	31	23	2	24	101	30	4	0	325	
Total	3,510	1,947	1,247	76	1,709	1,751	1,038	81	175	11,733	23,267	4,986	2,660	1,838	139	1,593	2,502	1,243	122	151	14,324	29,985

Note: Vehicle types are 1-van, 2-light cargo vehicle, 3-truck with 2 axles, 4-dump truck, 5-truck with 3 axles, 6-trailer with container, 7-trailer load only, 8-tank/tray, 9-crane, and 10-others.

Appendix A-1 Hourly vehicle count at Port of Manila
 Hourly Vehicle Count at South Harbor
 (June 9 to June 15, 1993)

Hourly Volume	Incoming Vehicle Type										Total	Outgoing Vehicle Type										Total
	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10	
100	10	8	0	18	20	58	2	1	1	62	180	9	7	1	45	40	85	13	0	0	87	
200	3	3	0	20	27	59	0	0	1	74	187	5	3	0	32	29	60	4	1	0	90	
300	1	3	0	21	27	38	0	1	0	74	165	2	1	0	18	27	58	5	1	0	71	
400	5	4	0	26	36	35	2	0	0	80	188	5	3	1	29	40	33	3	1	1	74	
500	36	17	2	7	14	25	8	1	1	298	409	25	36	1	9	24	43	5	0	0	205	
600	141	1	1	8	21	9	5	0	0	760	946	52	2	1	0	9	12	8	2	0	339	
700	334	12	11	9	48	11	12	2	0	1531	1970	175	1	0	3	9	7	4	0	0	598	
800	371	57	30	8	210	266	36	2	1	1704	2685	193	11	10	7	41	78	12	1	0	963	
900	460	61	25	19	140	271	51	5	3	1627	2662	285	42	17	28	168	161	37	3	2	1093	
1000	310	51	26	15	77	291	27	10	2	1381	2190	340	36	27	17	153	187	39	1	4	1141	
1100	309	42	22	40	48	325	31	2	4	1165	1988	301	68	51	24	128	224	33	9	2	1339	
1200	267	38	9	20	74	66	39	0	0	823	1336	219	8	5	47	118	22	2	3	3	923	
1300	360	61	51	15	93	339	63	1	0	1306	2289	248	42	30	41	131	249	24	0	2	1065	
1400	317	55	44	19	92	255	39	3	2	1233	2059	318	71	50	33	175	329	23	4	10	1165	
1500	292	30	20	15	65	277	56	8	4	936	1703	369	71	49	19	176	368	21	2	5	1260	
1600	232	25	14	10	56	237	33	5	1	925	1538	319	48	66	11	166	386	17	3	6	1654	
1700	199	15	14	11	41	143	17	0	2	878	1320	328	16	31	15	54	278	20	3	3	1610	
1800	111	9	2	10	17	67	9	1	2	560	788	161	11	2	6	34	132	6	3	0	797	
1900	103	5	4	19	45	78	14	1	1	419	689	139	3	3	9	29	78	11	1	2	617	
2000	109	4	12	37	58	123	39	1	0	296	679	82	6	7	25	52	106	21	1	4	315	
2100	48	2	3	41	37	106	12	0	0	211	460	76	4	8	47	42	115	24	1	0	230	
2200	41	7	0	35	43	153	5	0	0	221	505	33	26	2	46	44	163	29	1	0	312	
2300	17	9	0	20	43	91	5	0	0	107	292	26	21	0	19	40	120	18	1	0	181	
2400	9	8	2	35	45	57	1	3	0	97	257	6	6	1	2	14	34	4	0	0	104	
Total	4085	527	292	478	1377	3380	506	47	25	16768	27485	3716	554	366	490	1672	3424	403	41	44	16233	
																						26943

Note: Vehicle types are 1-van, 2-light cargo vehicle, 3-truck with 2 axles, 4-dump truck, 5-truck with 3 axles, 6-trailer with container, 7-trailer head only, 8-tank/lorry, 9-crane, and 10-others.

Appendix A-1 Hourly vehicle count at Port of Manila
 Hourly Vehicle Count at MICT
 (June 9 to June 15, 1993)

Hourly Volume	Incoming Vehicle Type										Total	Outgoing Vehicle Type										Total
	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10	
100	4	2	1	30	4	141	14	0	0	352	548	25	2	1	25	9	99	34	1	50	71	317
200	6	1	0	24	2	97	9	1	0	40	181	19	0	1	29	6	98	30	0	28	44	255
300	6	1	0	18	11	56	4	1	0	43	140	19	1	1	23	6	71	24	2	15	54	216
400	12	5	1	11	7	56	10	1	0	38	141	11	2	0	16	2	80	14	0	24	56	205
500	13	12	9	3	39	111	23	0	3	124	337	18	2	3	8	1	95	32	2	26	70	257
600	97	27	3	3	42	113	34	2	0	498	819	67	17	2	0	12	58	25	0	22	348	551
700	252	29	25	4	132	148	44	4	3	1593	2234	166	14	3	5	16	64	28	5	27	792	1120
800	275	175	74	3	217	362	85	6	5	2296	3498	194	33	9	9	46	152	63	6	89	1257	1858
900	369	170	71	10	291	627	121	6	12	2007	3694	231	51	29	5	90	362	82	4	164	1342	2360
1000	304	184	75	10	299	807	157	10	6	1818	3670	292	91	40	11	165	478	95	2	164	1381	2719
1100	289	124	57	16	147	585	189	11	10	1430	2838	311	110	51	14	151	440	84	7	132	1596	2896
1200	197	109	54	20	90	407	96	3	5	1087	2068	160	30	11	15	35	125	51	4	46	818	1295
1300	286	171	64	17	158	749	108	5	9	1701	3248	228	70	35	22	73	429	90	5	125	1002	2079
1400	386	135	83	16	209	1014	138	2	2	1646	3631	335	169	82	16	175	676	100	4	1	1352	2910
1500	327	114	49	18	141	977	133	3	1	1287	3050	314	194	41	6	143	464	76	3	0	1351	2592
1600	271	80	26	14	137	864	105	4	1	1053	2555	386	154	35	9	105	560	82	0	0	1826	3157
1700	171	37	13	8	44	407	83	3	3	511	1280	302	56	14	10	77	481	71	6	0	1241	2258
1800	123	42	11	33	29	212	50	3	0	390	893	134	36	6	8	49	373	42	1	0	572	1221
1900	96	28	5	13	20	201	35	1	0	238	637	109	47	19	24	57	497	40	2	0	367	1182
2000	53	18	7	39	22	254	26	1	2	216	638	61	29	6	37	28	342	29	1	0	231	764
2100	40	14	7	55	25	175	24	2	0	101	443	38	17	5	35	17	184	18	2	0	133	449
2200	24	9	12	99	9	353	55	1	1	135	698	76	6	4	97	24	231	97	2	77	160	774
2300	17	15	3	43	8	213	32	0	0	86	417	48	0	2	67	8	181	87	0	45	83	521
2400	12	5	2	37	2	133	17	1	0	71	280	30	2	1	28	6	71	47	1	16	71	273
Total	3590	1507	653	544	2085	9062	1592	71	63	18761	37928	3574	1133	401	519	1301	6611	1341	60	1051	16238	32225

Note: Vehicle types are 1-van, 2-light cargo vehicle, 3-truck with 2 axles, 4-dump truck, 5-truck with 3 axles, 6-trailer with container, 7-trailer head only, 8-tank/lorry, 9-crane, and 10-others.

Note : Category 9(Crane) includes vehicles of empty truck trailers

Appendix A-2 Sampling rate of the cargo OD survey at Port of Manila
 Sampling Rate of the Cargo OD Survey at North Harbor
 (based on the volume of commodity)

PPA Commodity Code	Total 1991 Vol. (MT)	Survey Volume (kgs)*	Sampling Rate (Year) (%)	Weekly Ave. 1991 (kgs)	Sampling Rate (Week) (%)
1	86480	1511053	1.7	1663077	90.9
2	40194	903818	2.2	772962	116.9
3	86260	2165302	2.5	1658846	130.5
4	72896	359756	0.5	1401846	25.7
5	232615	891250	0.4	4473365	19.9
6	46784	263475	0.6	899692	29.3
7	216074	2873021	1.3	4155269	69.1
8	175077	678550	0.4	3366865	20.2
9	3933	12000	0.3	75635	15.9
10	86754	661971	0.8	1668346	39.7
11	165334	1923385	1.2	3179500	60.5
12	30913	880820	2.8	594481	148.2
21	33103	180160	0.5	636596	28.3
22	274385	1731985	0.6	5276635	32.8
23	71792	842710	1.2	1380615	61.0
24	159746	870304	0.5	3072038	28.3
25	9541	126295	1.3	183481	68.8
26	9870	148261	1.5	189808	78.1
27	115423	785400	0.7	2219673	35.4
28	31879	382890	1.2	613058	62.5
29	30379	347169	1.1	584212	59.4
31	2009	143363	7.1	38635	371.1
32	22632	393588	1.7	435231	90.4
33	5018	70088	1.4	96500	72.6
41	748	225815	30.2	14385	1569.8
51	111424	2679051	2.4	2142769	125.0
61	164500	1373635	0.8	3163462	43.4
62	18693	578279	3.1	359481	160.9
63	79541	951225	1.2	1529635	62.2
64	530532	3943287	0.7	10202538	38.7
65	123708	783779	0.6	2379000	32.9
71	44860	1717282	3.8	862692	199.1
72	47983	1646470	3.4	922750	178.4
81	29355	470500	1.6	564519	83.3
91	1165417	12947102	1.1	22411865	57.8
Total	4325852	46463039	1.1	83189462	55.9

* The sampled volume of 251,397 kgs. without the commodity indicated was not considered in the computation of the sampling rate.

Appendix A-2 Sampling rate of the cargo OD survey at Port of Manila

Sampling Rate of the Cargo OD Survey at South Harbor
(based on the volume of commodity)

PPA Commodity Code	Total* 1991 Vol. (MT)	Survey Volume (kgs)**	Sampling Rate to 1991 Vol. (%)	Weekly Ave. 1991 (kgs)	Sampling Rate to Weekly A (%)
1	100758	0	0.0	1937654	0.0
2	35614	381000	1.1	684885	55.6
3	143749	1059538	0.7	2764404	38.3
4	15383	480895	3.1	295827	162.6
5	0	0	0.0	0	0.0
6	1706	0	0.0	32808	0.0
7	50257	687086	1.4	966481	71.1
8	0	0	0.0	0	0.0
9	192	52000	27.1	3692	1408.3
10	10222	171000	1.7	196577	87.0
11	13956	396420	2.8	268385	147.7
12	11936	68000	0.6	229538	29.6
21	37	38000	102.7	712	5340.5
22	80551	1601995	2.0	1549058	103.4
23	2011	4902770	243.8	38673	12677.5
24	150009	1922535	1.3	2884788	66.6
25	8071	200000	2.5	155212	128.9
26	17509	449490	2.6	336712	133.5
27	275	20000	7.3	5288	378.2
28	258892	311475	0.1	4978692	6.3
29	43181	688488	1.6	830404	82.9
31	7057	6000	0.1	135712	4.4
32	19563	31375	0.2	376212	8.3
33	105401	198250	0.2	2026942	9.8
41	7291	116500	1.6	140212	83.1
51	190021	4493053	2.4	3654250	123.0
61	1589	22500	1.4	30558	73.6
62	104620	2367815	2.3	2011923	117.7
63	96011	2551850	2.7	1846365	138.2
64	604618	4383604	0.7	11627269	37.7
65	43026	183700	0.4	827423	22.2
71	160533	2551001	1.6	3087173	82.6
72	111375	1994250	1.8	2141827	93.1
81	15788	132938	0.8	303615	43.8
91	353671	6537066	1.8	6801365	96.1
Total	2764873	39000594	1.4	53170635	73.3

* The 1991 statistical data of PPA is based only on the volumes of Pier 9 and 13.

** The sampled volume of 303,953 kgs. without the commodity indicated was not considered in the computation of the sampling rate.

Appendix A-2 Sampling rate of the cargo OD survey at Port of Manila

Sampling Rate of the Cargo OD Survey at MICT
(based on the volume of commodity)

PPA Commodity Code	Total 1991 Vol. (MT)	Survey Volume (kgs)	Sampling Rate (Year) (%)	Weekly Ave. 1991 (kgs)	Sampling Rate (Weekly) (%)
1	0	0	0.0	0	0.0
2	36246	1759940	4.9	697038	252.5
3	79434	801250	1.0	1527577	52.5
4	1472	0	0.0	28308	0.0
5	15	21000	140.0	288	7280.0
6	12788	191000	1.5	245923	77.7
7	173984	3538820	2.0	3345846	105.8
8	9850	0	0.0	189423	0.0
9	30	0	0.0	577	0.0
10	12342	399000	3.2	237346	168.1
11	6613	187000	2.8	127173	147.0
12	10652	398000	3.7	204846	194.3
21	26	234000	900.0	500	46800.0
22	217	0	0.0	4173	0.0
23	4973	666480	13.4	95635	696.9
24	94227	3354120	3.6	1812058	185.1
25	27585	1209500	4.4	530481	228.0
26	12972	1567500	12.1	249462	628.4
27	1067	0	0.0	20519	0.0
28	40850	526000	1.3	785577	67.0
29	37874	861500	2.3	728346	118.3
31	35	104500	298.6	673	15525.7
32	2892	61000	2.1	55615	109.7
33	362	168000	46.4	6962	2413.3
41	25648	189000	0.7	493231	38.3
51	484246	5125050	1.1	9312423	55.0
61	22112	83000	0.4	425231	19.5
62	457957	4199070	0.9	8806865	47.7
63	632	18900	3.0	12154	155.5
64	61998	1160710	1.9	1192269	97.4
65	113661	240980	0.2	2185788	11.0
71	391575	3599605	0.9	7530288	47.8
72	4871	1483190	30.4	93673	1583.4
81	195655	551500	0.3	3762596	14.7
91	325249	13201190	4.1	6254788	211.1
Total	2650110	45900805	1.7	50963654	90.1

* The sampled volume of 95,000 kgs. without the commodity indicated was not considered in the computation of the sampling rate.

Appendix A-3 Philippine Port Authority - Commodity Classification

CODE	COMMODITY CLASSIFICATION	DESCRIPTION	PSCC CODE
01	Live Animals	Live animals, chiefly for food	001
02	Dairy Products	Milk and cream, Butter, Cheese and Curd	002, 023, 024
03	Fish and Fish Preparations	Fish, crustaceans & Mollusks, fresh, chilled or frozen; dried salted or in brine; smoked	034, 035, 036, 037
04	Palay and Rice	Rice in husk or husked	042
05	Corn	Corn (maize) unmilled	044
06	Wheat	Unmilled wheat and meslin; meal and flour of wheat and flour of meslin	041, 046
07	Fruits & Vegetables	Vegetables, fresh, frozen or simply preserved (including dried leguminous vegetables); roots, tubers and other edible vegetable products; fruits & nuts, fresh, dried or preserved	054, 056, 057, 058
08	Sugar	Refined and centrifugal	061.11 to 061.20
09	Molasses	Edible and inedible	061.51, 061.52
10	Animal Feeds	Feeding stuff for animals (not including unmilled cereals)	081
11	Bottled Cargo	Non-alcoholic and alcoholic beverages	111, 112
12	Tobacco and Manufactures	Unmanufactured and manufactured tobacco	121, 122
21	Copra	Copra excluding copra flours and meals	223.10

COMMODITY CLASSIFICATION

CODE	COMMODITY CLASSIFICATION	DESCRIPTION	PSCC CODE
22	Logs	Timber in the rough or roughly squared	247
23	Lumber	Wood simply worked (sawn lengthwise, sliced or peeled)	248
24	Paper and Pulp	Paper, paperboard, and articles of paper pulp, of paper or of paperboard; pulp and waste paper	251, 641, 642
25	Abaca	Abaca spindle-stripped, hand-stripped and decorticated	265.51, 52, 53
26	Textile Fiber	Textile fibers (other than wool tops) and their wastes (not manufactured into yarn of fabric) - Silk, cotton, jute, vegetable fibers, synthetic fibers, other man-made fibers, wool and other animal hair	Div. 26 excl. 265.51, 265.52 and 265.53
27	Fertilizer	Crude and manufactured fertilizers	271, 562
28	Crude Minerals	Stone, sand & gravel, sulphur and iron pyrites	Div. 27 excl. 271
29	Metaliferrous ores, & Metal Scrap	Iron ore & concentrates, ores & concentrate of base metals (copper, nickel, aluminum, leads, zinc, tin), waste and scrap metal of iron & steel	Div. 28
31	Crude Petroleum	Petroleum oils, crude, and crude oils obtained from bituminous minerals	333
32	Refined Petroleum & Products	Gasoline, kerosene, gas oils, fuel oils, lubricants	334

COMMODITY CLASSIFICATION

CODE	COMMODITY CLASSIFICATION	DESCRIPTION	PSCC CODE
33	Mineral Fuels	Coal, coke & briquettes; natural & manufactured gas	Div. 32 & 34
41	Coconut Oil	Coconut oil, crude and refined	424.31, 424.32
51	Chemicals	Organic & inorganic chemicals; dyeing, tanning & coloring materials; medicinal & pharmaceutical products; essential oils & perfume materials; explosives & pyrotechnic products; artificial resins & plastic materials	Sec. 5 excl. 562
61	Plywood & Veneer	Veneers, plywood, "improved" or reconstituted wood	634
62	Textile & Garment Products	Textile yarns, fabrics, made-up articles and related products	Div. 65
63	Cement	Portland cement	661.21
64	Iron and Steel	Pig iron; ingots & other primary form; iron & steel bars, rods, angles; plates & sheets; iron & steel wire; tubes, pipes & fittings; casting, forging & stamping	Div. 67
65	Manufactured Metal	Structures & parts of structures; containers for storage & transport; wire products; nails, screw, nuts, bolts, rivets; tools; cutlery; household equipment	Div. 69

COMMODITY CLASSIFICATION

CODE	COMMODITY CLASSIFICATION	DESCRIPTION	PSCC CODE
71	Machinery and Electrical Equipment	Power generating machinery & equipment; machinery specialized for particular industries; metalworking machinery; general industrial machinery & equipment & parts; office machine & automatic data processing equipment; telecommunications & sound recording and reproducing apparatus & equipt.; electrical machinery, apparatus and appliances & parts	Div. 71, 72, 73, 74, 75, 76, 77,
72	Transport Equipment	Road vehicles and other transport equipment	Div. 78, 79
81	Furniture	Furniture & parts	821.11, 821.19
91	Other General Cargo	All other commodities which do not fall under any of the above items	

D-221/PSCC-COM.PRN

Appendix A-4 Cargo OD Table at Port of Manila(1)

North Harbor

	0102	0103	0104	0202	0301	0302	0304	0305	0306
	Ilocos Sur	La Union	Pangasinan	Cagayan	Bataan	Bulacan	Pampanga	Tarlac	Zambales
Ilocos Norte	0	0	0	0	0	0	0	0	0
Ilocos Sur	0	0	0	0	0	0	0	0	0
La Union	0	0	0	0	0	0	0	0	0
Pangasinan	0	0	0	0	0	0	0	0	0
Cagayan	0	0	0	0	0	0	0	0	0
Isabela	0	0	0	0	0	0	0	0	0
Bataan	0	0	0	0	0	0	0	0	0
Bulacan	0	0	0	0	0	0	0	0	0
Nueva Ecija	0	0	0	0	0	0	0	0	0
Pampanga	0	0	0	0	0	0	0	0	0
Tarlac	0	0	0	0	0	0	0	0	0
Zambales	0	0	0	0	0	10,910	0	0	0
Aurora	0	0	0	0	0	0	0	0	0
Batangas	0	0	0	0	0	5,000	0	0	5,200
Cavite	0	0	0	0	0	0	0	0	0
Laguna	0	0	0	0	0	0	0	0	0
Occidental Mindo	0	0	0	0	0	7,500	5,200	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0
Palawan	1,745	0	0	0	3,490	21,422	45,235	0	0
Quezon	0	0	0	0	0	0	0	0	0
Rizal	0	0	0	0	0	0	0	0	0
Romblon	0	0	0	0	0	14,250	0	0	2,250
Albay	0	0	0	0	0	0	0	0	0
Camarines Sur	0	0	0	0	0	0	0	0	0
Nasbate	0	0	33,900	0	0	29,050	36,550	0	0
Sorsogon	0	0	0	0	0	0	0	0	0
Aklan	0	0	0	0	0	48,275	42,300	0	0
Capiz	0	0	0	0	0	0	3,900	11,050	0
Iloilo	0	0	0	0	0	60,025	5,000	0	0
Negros Occidenta	0	0	0	0	0	17,050	25,200	0	0
Bohol	0	0	0	0	0	0	0	0	0
Cebu	0	51,900	9,000	0	0	181,330	40,750	0	12,000
Negros Oriental	0	0	0	0	0	8,900	15,000	0	0
Leyte	0	20,000	0	0	0	65,000	81,875	0	0
Samar	0	0	0	0	0	10,000	0	0	0
Southern Leyte	0	0	0	0	0	2,000	0	0	0
Sulu	0	0	0	0	0	0	0	0	0
Zamboanga del No	0	0	0	0	0	0	0	0	0
Zamboanga del Su	0	0	0	2,000	0	235,000	73,000	0	0
Agusan del Norte	0	0	0	8,890	0	94,750	79,500	0	21,050
Misamis Occident	0	0	0	0	0	20,200	0	0	0
Misamis Oriental	0	0	0	0	0	88,905	161,404	0	0
Surigao del Nort	0	0	0	0	0	0	0	0	0
Davao del Sur	0	0	0	0	0	27,088	40,000	0	0
Davao Oriental	0	0	0	0	0	0	0	0	0
South Cotabato	0	0	0	0	0	90,000	65,000	0	0
Lanao del Norte	0	0	0	0	0	47,500	0	0	0
Benguet	0	0	0	0	0	0	0	0	0
Ifugao	0	0	0	0	0	0	0	0	0
Metro Manila	0	0	0	0	0	0	21,000	0	3,500
Foreign Countrie	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0

	0401	0402	0403	0404	0405	0407	0408	0409
	Aurora	Batangas	Cavite	Laguna	Occidental	Oriental	Mi Palawan	Quezon
Ilocos Norte	0	0	0	0	0	0	0	0
Ilocos Sur	0	0	0	0	0	0	0	0
La Union	0	0	0	0	0	0	0	0
Pangasinan	0	0	0	0	0	0	25,500	0
Cagayan	0	0	24,000	0	4,030	0	0	0
Isabela	0	0	0	0	0	0	0	0
Bataan	0	0	0	0	0	0	0	0
Bulacan	0	0	0	0	1,400	2,000	40,000	0
Nueva Ecija	0	0	0	0	0	0	2,300	0
Pampanga	0	0	0	0	0	2,350	0	0
Tarlac	0	0	0	0	0	0	0	0
Zambales	0	0	0	0	0	0	0	0
Aurora	0	0	4,250	0	0	0	0	0
Batangas	0	0	0	0	0	0	0	0
Cavite	0	0	0	0	0	0	21,000	0
Laguna	0	0	0	0	0	0	19,800	0
Occidental Mindoro	0	0	10,800	21,000	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0
Palawan	0	0	0	0	0	0	0	0
Quezon	0	0	0	0	0	0	0	0
Rizal	0	0	0	0	0	0	0	0
Romblon	0	10,000	1,600	12,000	0	0	0	0
Albay	0	0	0	0	0	0	0	0
Camarines Sur	0	0	0	0	0	0	0	0
Masbate	0	0	7,500	42,350	0	0	0	0
Sorsogon	0	0	0	0	0	0	0	0
Aklan	0	0	10,370	500	0	0	0	0
Capiz	0	0	0	0	0	0	0	0
Iloilo	0	0	21,700	94,250	0	0	0	0
Negros Occidenta	3,750	0	55,890	153,400	0	0	0	0
Bohol	0	0	0	3,938	0	0	0	0
Cebu	0	41,000	37,400	26,040	0	0	0	0
Negros Oriental	0	11,000	5,320	0	0	0	0	0
Leyte	0	0	7,000	42,000	0	0	0	0
Samar	0	0	0	0	0	0	0	0
Southern Leyte	0	0	0	0	0	0	0	0
Sulu	0	0	0	0	0	0	0	0
Zamboanga del No	0	0	0	0	0	0	0	0
Zamboanga del Su	0	21,000	10,910	9,340	0	0	0	0
Agusan del Norte	0	0	0	21,000	0	0	0	0
Misamis Occident	0	0	0	0	0	0	0	0
Misamis Oriental	0	10,100	0	41,000	0	0	0	0
Surigao del Nort	0	0	0	0	0	0	0	0
Davao del Sur	0	0	0	24,000	0	0	0	0
Davao Oriental	0	0	0	0	0	0	0	0
South Cotabato	0	0	0	10,000	0	0	0	0
Lanao del Norte	5,500	0	0	43,000	0	0	0	0
Benguet	0	0	0	0	0	0	19,000	0
Ifugao	0	0	0	0	0	0	0	0
Metro Manila	0	0	0	27,613	37,475	93,878	552,912	21,000
Foreign Countrie	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0

	0410	0411	0501	0505	0601	0603	0604	0606	0701
	Rizal	Romblon	Albay	Masbate	Aklan	Capiz	Iloilo	Negros Occi	Bohol
Ilocos Norte	0	0	0	0	0	21,000	0	0	0
Ilocos Sur	0	0	0	0	0	0	0	0	0
La Union	0	0	0	0	0	0	0	21,980	0
Pangasinan	0	0	0	0	0	0	41,500	15,350	0
Cagayan	0	0	0	0	0	0	0	0	0
Isabela	0	0	0	0	12,000	0	0	1,200	0
Bataan	0	0	0	0	1,500	0	18,900	0	0
Bulacan	0	14,050	0	16,676	10,000	27,500	53,000	69,250	1,350
Nueva Ecija	0	0	0	0	0	18,000	9,000	4,788	0
Pampanga	0	0	0	0	0	8,000	23,300	103,500	1,250
Tarlac	0	0	0	0	0	0	10,700	0	0
Zambales	0	0	0	0	0	0	0	40,000	0
Aurora	0	0	0	0	0	0	0	0	0
Batangas	0	0	0	0	0	1,500	13,500	0	0
Cavite	0	0	0	0	0	0	38,925	55,200	0
Laguna	0	0	0	0	0	21,980	129,820	212,746	1,050
Occidental Mindo	0	15,750	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0
Palawan	5,400	0	0	0	0	0	0	0	0
Quezon	0	0	0	0	0	0	0	20,000	0
Rizal	1,950	0	0	0	11,000	0	68,450	20,000	0
Romblon	26,700	0	0	0	0	0	0	0	0
Albay	0	0	0	0	0	0	0	0	0
Camarines Sur	0	0	0	0	0	0	0	0	0
Masbate	0	0	0	0	0	0	0	0	0
Sorsogon	0	0	0	0	0	0	0	0	0
Aklan	2,200	0	0	0	0	0	0	0	0
Capiz	24,100	0	0	0	0	0	0	0	0
Iloilo	89,600	0	0	0	0	0	0	0	0
Negros Occidenta	16,500	0	0	0	0	0	0	0	0
Bohol	0	0	0	0	0	0	0	0	0
Cebu	105,900	0	0	0	0	0	0	0	0
Negros Oriental	20,900	0	0	0	0	0	0	0	0
Leyte	42,890	0	0	0	0	0	0	0	0
Samar	0	0	0	0	0	0	0	0	0
Southern Leyte	0	0	0	0	0	0	0	0	0
Sulu	0	0	0	0	0	0	0	0	0
Zamboanga del No	0	0	0	0	0	0	0	0	0
Zamboanga del Su	280,400	0	0	0	0	0	0	0	0
Agusan del Norte	13,200	0	0	0	0	0	0	0	0
Misamis Occident	0	0	0	0	0	0	0	0	0
Misamis Oriental	0	0	0	0	0	0	0	0	0
Surigao del Nort	0	0	0	0	0	0	0	0	0
Davao del Sur	25,000	0	0	0	0	0	0	0	0
Davao Oriental	0	0	0	0	0	0	0	0	0
South Cotabato	20,000	0	0	0	0	0	0	0	0
Lanao del Norte	389,500	0	0	0	0	0	0	0	0
Benguet	0	0	0	0	0	0	0	4,800	0
Ifugao	0	0	0	0	0	0	0	0	0
Metro Manila	0	126,118	51,750	293,886	128,217	311,993	1,661,054	2,037,353	596,969
Foreign Countrie	0	0	0	0	0	0	0	0	0
Unknown	1,400	0	0	0	0	55,540	1,900	0	0

	0702	0703	0802	0805	0904	0905	1001	1002	1005
	Cebu	Negros Ori	Leyte	Samar	Zamboanga d	Zamboanga d	Agusan del	Agusan del	Misamis Occ
Ilocos Norte	11,500	0	2,000	0	0	0	0	0	0
Ilocos Sur	61,500	0	0	0	0	0	1,013	0	0
La Union	7,100	0	0	0	0	0	0	0	0
Pangasinan	26,000	0	0	0	0	1,375	0	0	0
Cagayan	0	0	0	0	0	0	0	0	0
Isabela	0	0	0	0	0	0	0	0	0
Bataan	0	0	0	0	0	0	0	0	0
Bulacan	306,106	3,200	2,400	0	3,000	48,400	47,030	0	6,000
Nueva Ecija	27,450	0	0	0	0	9,450	0	0	0
Pampanga	116,190	0	6,600	0	0	0	2,000	0	0
Tarlac	7,650	0	0	0	0	0	0	0	0
Zambales	0	0	0	0	0	0	0	0	0
Aurora	0	0	0	0	0	0	0	0	0
Batangas	42,240	0	0	0	0	2,000	0	0	0
Cavite	87,605	27,000	0	0	19,860	10,560	5,200	0	10,950
Laguna	230,163	22,100	48,300	0	40,000	12,000	0	6,675	4,400
Occidental Mindo	0	0	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0
Palawan	0	0	0	0	0	0	0	0	0
Quezon	0	0	0	0	0	0	0	0	0
Rizal	174,500	0	61,923	0	43,875	42,010	0	0	2,175
Romblon	0	0	0	0	0	0	0	0	0
Albay	0	0	0	0	0	0	0	0	0
Camarines Sur	0	0	0	0	0	0	0	0	0
Masbate	0	0	0	0	0	0	0	0	0
Sorsogon	0	0	0	0	0	0	0	0	0
Aklan	0	0	0	0	0	0	0	0	0
Capiz	0	0	0	0	0	0	0	0	0
Iloilo	0	0	0	0	0	0	0	0	0
Negros Occidenta	0	0	0	0	0	0	0	0	0
Bohol	0	0	0	0	0	0	0	0	0
Cebu	0	0	0	0	0	0	0	0	0
Negros Oriental	0	0	0	0	0	0	0	0	0
Leyte	0	0	0	0	0	0	0	0	0
Samar	0	0	0	0	0	0	0	0	0
Southern Leyte	0	0	0	0	0	0	0	0	0
Sulu	0	0	0	0	0	0	0	0	0
Zamboanga del No	0	0	0	0	0	0	0	0	0
Zamboanga del Su	0	0	0	0	0	0	0	0	0
Agusan del Norte	0	0	0	0	0	0	0	0	0
Misamis Occident	0	0	0	0	0	0	0	0	0
Misamis Oriental	0	0	0	0	0	0	0	0	0
Surigao del Nort	0	0	0	0	0	0	0	0	0
Davao del Sur	0	0	0	0	0	0	0	0	0
Davao Oriental	0	0	0	0	0	0	0	0	0
South Cotabato	0	0	0	0	0	0	0	0	0
Lanao del Norte	0	0	0	0	0	0	0	0	0
Benguet	30,175	0	2,400	0	0	0	0	0	12,675
Ifugao	0	0	0	0	0	0	0	0	19,500
Metro Manila	9,247,960	394,621	1,550,626	49,008	224,164	1,285,787	285,669	1,350	392,836
Foreign Countrie	10,000	0	0	0	0	0	0	0	0
Unknown	11,500	0	0	0	0	0	475	0	5,230

	1006	1007	1102	1104	1105	1201	1202	1400	9999
	Misamis Ori	Surigao del N	Davao del S	South Cotab	Surigao del N	Lanao del N	Lanao del S	Metro Manila	Unknown
Ilocos Norte	0	0	0	11,200	0	0	0	0	0
Ilocos Sur	0	0	0	0	0	2,000	0	10,500	0
La Union	0	0	0	0	0	0	0	0	0
Pangasinan	22,000	0	10,500	0	0	0	0	0	0
Cagayan	0	0	0	0	0	0	0	475,700	975
Isabela	0	0	0	0	0	15,750	0	102,200	0
Bataan	0	0	2,000	0	0	0	0	0	0
Bulacan	10,550	0	204,600	27,000	0	1,100	0	70,200	0
Nueva Ecija	0	0	0	14,300	0	0	0	0	0
Pampanga	6,875	0	0	18,300	0	0	0	13,350	0
Tarlac	0	0	2,250	0	0	0	0	0	0
Zambales	0	0	0	0	0	0	0	0	0
Aurora	0	0	0	0	0	0	0	0	0
Batangas	0	0	18,000	22,000	0	0	0	0	0
Cavite	12,250	0	0	0	0	5,500	0	0	0
Laguna	81,000	0	94,450	10,000	0	0	0	0	0
Occidental Mindo	0	0	0	0	0	0	0	175,200	0
Oriental Mindoro	0	0	0	0	0	0	0	22,350	0
Palawan	9,500	0	0	0	0	0	0	310,956	0
Quezon	0	0	0	0	0	0	0	0	0
Rizal	32,200	12,000	74,950	2,000	0	77,600	0	0	0
Romblon	0	0	0	0	0	0	0	157,129	0
Albay	0	0	0	0	0	0	0	5,200	0
Camarines Sur	0	0	0	0	0	0	0	5,200	0
Masbate	0	0	0	0	0	0	0	184,525	0
Sorsogon	0	0	0	0	0	0	0	10,000	0
Aklan	0	0	0	0	0	0	0	422,458	0
Capiz	0	0	0	0	0	0	0	168,535	0
Iloilo	0	0	0	0	0	0	0	1,129,399	0
Negros Occidenta	0	0	0	0	0	0	0	1,647,660	0
Bohol	0	0	0	0	0	0	0	69,900	24,000
Cebu	0	0	0	0	0	0	0	2,152,400	27,000
Negros Oriental	0	0	0	0	0	0	0	190,536	0
Leyte	0	0	0	0	0	0	0	500,134	200
Samar	0	0	0	0	0	0	0	33,425	0
Southern Leyte	0	0	0	0	0	0	0	0	0
Sulu	0	0	0	0	0	0	0	20,000	0
Zamboanga del No	0	0	0	0	0	0	0	131,330	0
Zamboanga del Su	0	0	0	0	0	0	0	1,905,415	0
Agusan del Norte	0	0	0	0	0	0	0	638,195	0
Misamis Occident	0	0	0	0	0	0	0	116,275	0
Misamis Oriental	0	0	0	0	0	0	0	916,320	0
Surigao del Nort	0	2,400	0	0	0	0	0	33,800	0
Davao del Sur	0	0	0	0	0	0	0	760,199	0
Davao Oriental	0	0	0	0	0	0	0	2,000	0
South Cotabato	0	0	0	0	0	0	0	451,588	0
Lanao del Norte	0	0	0	0	0	0	0	1,311,000	0
Benguet	21,000	0	0	0	0	0	0	0	0
Ifugao	0	0	0	0	0	0	0	0	0
Metro Manila	1,312,106	165,774	1,459,381	921,791	19,100	738,900	2,000	326,470	36,230
Foreign Countrie	0	0	0	0	0	0	0	0	0
Unknown	22,250	0	10,000	4,320	0	0	0	12,750	337,888

Appendix A-4 Cargo OD Table at Port of Manila(2)

South Harbor

	0104	0202	0301	0302	0303	0304	0305	0402
	Pangasinan	Cagayan	Bataan	Bulacan	Nueva Ecija	Pampanga	Tarlac	Batangas
Cagayan		0	0	0	0	0	0	0
Isabela		0	0	0	0	0	0	0
Nueva Vizcaya		0	0	0	0	0	0	0
Bataan		0	0	0	0	0	0	0
Bulacan		0	0	0	0	0	0	0
Nueva Ecija		0	0	0	0	0	0	0
Pampanga		0	0	0	0	0	0	0
Zambales		0	0	0	0	0	0	0
Batangas		0	0	0	0	0	0	0
Cavite		0	0	0	0	0	0	0
Laguna		0	0	0	0	0	0	0
Quezon		0	0	0	0	0	0	0
Rizal		0	0	0	0	0	0	0
Albay		0	0	0	0	0	0	0
Camarines Sur		0	0	0	0	0	0	0
Negros Occidenta		0	0	0	0	0	0	0
Cebu		0	0	0	0	0	0	0
Misamis Oriental		0	0	0	0	0	0	0
Davao del Sur		0	0	0	0	0	0	0
Metro Manila		0	22,000	65,500	0	30,000	0	2,300
Foreign Countries	18,000	44,700	544,488	5,144,455	30,000	265,543	950	231,200
Unknown		0	0	0	0	0	0	0
TOTAL	18,000	44,700	566,488	5,209,955	30,000	295,543	950	233,640

	0403	0404	0405	0410	0501	0502	0606	0702
	Cavite	Laguna	Marinduque	Rizal	Albay	Camarines N	Negros Occi	Cebu
Cagayan	0	0	0	0	0	0	0	0
Isabela	0	0	0	0	0	0	0	0
Nueva Vizcaya	0	0	0	0	0	0	0	0
Bataan	5,750	0	0	0	0	0	0	0
Bulacan	0	0	0	0	0	0	0	0
Nueva Ecija	0	0	0	0	0	0	0	0
Pampanga	0	0	0	0	0	0	0	0
Zambales	0	0	0	0	0	0	0	0
Batangas	0	0	0	0	0	0	0	0
Cavite	0	0	0	0	0	0	0	0
Laguna	0	0	0	0	0	0	0	0
Quezon	0	0	0	0	0	0	0	0
Rizal	0	0	0	0	0	0	0	0
Albay	0	0	0	0	0	0	0	0
Camarines Sur	0	0	0	0	0	0	0	0
Negros Occidenta	0	0	0	0	0	0	0	0
Cebu	0	0	0	0	0	0	0	0
Misamis Oriental	0	0	0	0	0	0	0	0
Davao del Sur	0	0	0	0	0	0	0	0
Metro Manila	148,000	81,180	0	56,980	0	0	0	0
Foreign Countrie	560,495	1,691,615	21,000	654,540	107,000	21,000	15,000	27,500
Unknown	21,000	0	0	0	0	0	0	0
TOTAL	735,245	1,772,795	21,000	711,520	107,000	21,000	15,000	27,500

	0802	1302	1400	9000	9999		
	Leyte	Benguet	Metro Manila	Foreign	Cou	Unknown	Total
Cagayan	0	0	5,000	0	0	0	5000
Isabela	0	0	0	36,000	0	0	36000
Nueva Vizcaya	0	0	0	10,000	0	0	10000
Bataan	0	0	59,990	20,000	0	0	85740
Bulacan	0	0	25,800	193,066	0	0	218866
Nueva Ecija	0	0	24,000	0	0	0	24000
Pampanga	0	0	0	74,000	20,000	0	94000
Zambales	0	0	0	10,000	0	0	10000
Batangas	0	0	15,000	21,000	0	0	36000
Cavite	0	0	103,250	105,900	0	0	209150
Laguna	0	0	72,500	186,500	0	0	259000
Quezon	0	0	0	38,000	0	0	38000
Rizal	0	0	0	80,000	0	0	80000
Albay	0	0	0	40,000	0	0	40000
Camarines Sur	0	0	20,000	0	0	0	20000
Negros Occidenta	0	0	0	41,000	0	0	41000
Cebu	0	0	0	70,000	0	0	70000
Misamis Oriental	0	0	0	18,000	0	0	18000
Davao del Sur	0	0	0	21,000	0	0	21000
Metro Manila	20,000	0	2,264,552	2,432,282	161,800	0	5284654
Foreign Countries	0	21,000	22,887,150	0	0	0	32285716
Unknown	0	0	219,450	20,000	158,000	0	418450
TOTAL	20,000	21,000	25,696,692	3,416,748	339,800	0	39304576

Appendix A-4 Cargo OD Table at Port of Manila(3)

MICT

	0301	0302	0304	0402	0403	0404	0409	0410	0701	1400	9000	9999	TOTALS
	Bataan	Bulacan	Pampanga	Batangas	Cavite	Laguna	Quezon	Rizal	Bohol	Metro Manil	Foreign Cou	Unknown	
La Union	0	0	0	0	0	0	0	0	0	0	168,000	0	168,000
Pangasinan	0	0	0	0	0	0	0	0	0	0	21,000	0	21,000
Isabela	0	0	0	0	0	0	0	0	0	0	21,000	0	21,000
Bataan	0	0	0	0	0	0	0	0	0	0	188,320	0	188,320
Bulacan	0	0	0	0	0	0	0	0	0	0	772,000	0	772,000
Nueva Ecija	0	0	0	0	0	0	0	0	0	0	124,000	0	124,000
Pampanga	0	0	0	0	0	0	0	42,000	0	772,500	0	0	814,500
Tarlac	0	0	0	0	0	0	0	0	0	0	84,000	0	84,000
Zambales	0	0	0	0	0	0	0	0	0	0	10,500	0	10,500
Aurora	0	0	0	0	0	0	0	0	0	21,000	42,000	0	63,000
Batangas	0	0	0	0	0	0	0	0	0	0	126,000	0	126,000
Cavite	0	0	0	0	0	0	0	0	0	0	1,060,000	0	1,060,000
Laguna	0	0	0	0	0	0	0	0	0	6,000	1,512,320	0	1,518,320
Quezon	0	0	0	0	0	0	0	0	0	0	788,500	0	788,500
Rizal	0	0	0	0	0	0	0	0	0	21,000	711,000	0	732,000
Albay	0	0	0	0	0	0	0	0	0	0	239,400	0	239,400
Camarines Norte	0	0	0	0	0	0	0	0	0	0	42,000	0	42,000
Negros Occidenta	0	0	0	0	0	0	0	0	0	0	105,000	0	105,000
Cebu	0	0	0	0	0	0	0	0	0	0	603,070	0	603,070
Zamboanga del Su	0	0	0	0	0	0	0	0	0	0	42,000	0	42,000
Misamis Oriental	0	0	0	0	0	0	0	0	0	0	42,000	0	42,000
Davao del Sur	0	0	0	0	0	0	0	0	0	0	168,000	0	168,000
South Cotabato	0	0	0	0	0	0	0	0	0	0	42,000	0	42,000
Metro Manila	20,750	251,000	80,000	30,000	92,400	203,400	0	101,000	21,000	1,654,400	13,220,200	84,000	15,758,150
Foreign Countrie	225,000	1,621,000	248,000	54,000	851,440	709,550	44,000	1,496,980	0	17,149,875	0	0	22,413,845
Unknown	0	0	0	0	0	0	0	0	0	45,000	0	4,200	49,200
TOTAL	249,750	1,872,000	328,000	84,000	953,840	912,950	44,000	1,597,980	21,000	18,939,275	20,904,810	88,200	45,995,805

Appendix A-5 Vehicle OD Table at Port of Manila(1)

Vehicle OD for North Harbor
(given in commodity volumes)

	0103	0104	0202	0301	0302	0304	0305	0306	0401	0402	0403	0404	0408	0410	0402	1401	1402	1403	1404	TOTALS
	La Union	Pangasinan	Casayan	Bataan	Bulacan	Pampanga	Tarlac	Zambales	Aurora	Batangas	Cavite	Laguna	Palawan	Rizal	Cebu	Manila	Quezon City	Kalocan ci	Makati	TOTALS
Iloocos Norte	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46,500	0	0	0	46,500
Iloocos Sur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23,050	0	0	0	23,050
La Union	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21,960	0	0	0	21,960
Pangasinan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	151,225	0	0	0	151,225
Isabela	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,230	0	0	0	17,230
Bataan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,400	0	0	0	22,400
Bulacan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	871,690	0	0	0	871,690
Nueva Ecija	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57,487	0	0	0	57,488
Pampanga	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	262,305	0	0	0	262,305
Tarlac	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,600	0	0	0	22,600
Zambales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40,000	0	0	0	40,000
Aurora	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	30,100
Batangas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	107,000	0	0	0	107,000
Cavite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	322,670	0	0	0	322,670
Laguna	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	921,114	0	0	0	921,114
Palawan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28,117	0	0	0	28,118
Quezon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,000	0	0	0	20,000
Rizal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	598,082	0	0	0	598,083
Benguet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94,270	0	0	0	94,270
Manila	71,900	35,600	10,890	3,490	1,050,947	567,909	21,000	23,300	18,750	77,200	146,300	465,617	2,800	1,139,450	1,000	18,590,144	3,761,315	2,042,910	1,751,941	29,782,465
Quezon City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,797,556	0	0	0	5,801,682
Kalocan City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,336,370	0	0	0	3,336,370
Makati	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,131,823	0	0	0	4,131,824
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,900	0	0	0	1,900
TOTAL	71,900	35,600	10,890	3,490	1,050,948	571,809	21,000	23,300	23,875	77,200	151,500	465,618	2,800	1,139,450	3,500	35,484,298	3,761,315	2,063,911	1,751,941	46,714,335

Appendix A-5 Vehicle OD Table at Port of Manila(2)

Vehicle OD for South Harbor
(given in commodity volumes)

	0124	0222	0301	0302	0303	0304	0305	7402	0403	0404	0409	0410	0501	0502	1302	1401	1402	1403	1404		
	Pangasinan Cagayan Bataan Bulacan Nueva Ecija Pampanga Tarlac Batangas Cavite Laguna Quezon Rizal Albay Camarines N Benguet Manila Quezon City Iloiloan Cj Makati																			TOTALS	
Cagayan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,000	0	0	0	5,000
Issabela	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18,000	0	0	0	18,000
Bataan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81,750	0	0	0	81,750
Bulacan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	164,366	0	0	0	164,366
Pampanga	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38,000	0	0	0	38,000
Aurora	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Batangas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40,000	0	0	0	40,000
Cavite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105,900	0	0	0	105,900
Laguna	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	192,000	0	0	0	192,000
Quezon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38,000	0	0	0	38,000
Rizal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80,000	0	0	0	80,000
Albay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40,000	0	0	0	40,000
Manila	18,000	700	479,487	5,204,788	50,000	235,542	950	222,640	667,495	1,786,542	21,000	681,040	107,000	21,000	21,000	6,463,294	6,961,143	8,658,875	4,759,555	36,419,256	
Quezon City	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	493,763	0	0	0	493,761
Iloiloan City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	697,425	0	0	0	697,425
Makati	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	883,579	0	0	2,500	886,079
Foreign Countries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15,000	0	20,000	0	35,000
TOTAL	18,000	700	479,488	5,204,808	50,000	235,542	950	222,640	667,495	1,786,543	21,000	681,040	107,000	21,000	21,000	9,326,875	6,961,143	8,678,875	4,762,055	39,304,555	

Appendix A-5 Vehicle OD Table at Port of Manila(3)

Vehicle OD for MICT
(given in commodity volumes)

	0301	0302	0304	0402	0403	0404	0409	0410	0701	1401	1402	1403	1404	TOTALS
	Bataan	Bulacan	Pampanga	Batangas	Cavite	Laguna	Quezon	Rizal	Bohol	Manila	Quezon City	Kalococan Ci	Makati	
La Union	0	0	0	0	0	0	0	0	0	105,000	0	0	0	105,000
Pangasinan	0	0	0	0	0	0	0	0	0	21,000	0	0	0	21,000
Isabela	0	0	0	0	0	0	0	0	0	21,000	0	0	0	21,000
Bataan	0	0	0	0	0	0	0	0	0	104,320	0	0	0	104,320
Bulacan	0	0	0	0	0	0	0	0	0	667,000	0	0	0	667,000
Nueva Ecija	0	0	0	0	0	0	0	0	0	125,000	0	0	0	125,000
Pampanga	0	0	0	0	0	0	0	0	0	772,500	0	0	0	772,500
Tarlac	0	0	0	0	0	0	0	0	0	42,000	0	0	0	42,000
Zambales	0	0	0	0	0	0	0	0	0	10,500	0	0	0	10,500
Aurora	0	0	0	0	0	0	0	0	0	21,000	0	0	0	21,000
Batangas	0	0	0	0	0	0	0	0	0	105,000	0	0	0	105,000
Cavite	0	0	0	0	0	0	0	0	0	787,000	0	0	0	787,000
Laguna	0	0	0	0	0	0	0	0	0	1,344,320	0	0	0	1,344,320
Quezon	0	0	0	0	0	0	0	0	0	662,500	0	0	0	662,500
Rizal	0	0	0	0	0	0	0	0	0	522,000	0	0	0	522,000
Albay	0	0	0	0	0	0	0	0	0	134,400	0	0	0	134,400
Camarines Norte	0	0	0	0	0	0	0	0	0	21,000	0	0	0	21,000
Manila	81,750	2,224,400	226,000	30,000	953,840	638,840	20,000	1,288,480	21,000	11,110,510	4,159,190	5,053,825	4,503,910	30,310,455
Quezon City	0	0	0	0	0	0	0	0	0	3,460,570	0	0	0	3,460,570
Kalococan City	0	0	0	0	0	0	0	0	0	2,071,450	0	0	0	2,071,450
Makati	0	0	0	0	0	0	0	0	0	4,687,790	0	0	0	4,687,790
TOTAL	81,750	2,224,400	226,000	30,000	953,840	638,840	20,000	1,288,480	21,000	26,795,860	4,159,190	5,053,825	4,503,910	45,995,805

Appendix A-6 Passenger OD table at North Harbor

	0102	0103	0104	0202	0203	0301	0302	0303	0304
	Ilocos Sur	La Union	Pangasinan	Cagayan	Isabela	Bataan	Bulacan	Nueva Ecija	Pampanga
Ilocos Norte	0	0	0	0	0	0	0	0	0
Ilocos Sur	0	0	0	0	0	0	0	0	0
La Union	0	0	0	0	0	0	0	0	0
Pangasinan	0	0	0	0	0	0	0	0	0
Cagayan	0	0	0	0	0	0	0	0	0
Isabela	0	0	0	0	0	0	0	0	0
Nueva Vizcaya	0	0	0	0	0	0	0	0	0
Bataan	0	0	0	0	0	0	0	0	0
Bulacan	0	0	0	0	0	0	0	0	0
Nueva Ecija	0	0	0	0	0	0	0	0	0
Pampanga	0	0	0	0	0	0	0	0	0
Tarlac	0	0	0	0	0	0	0	0	0
Zambales	0	0	0	0	0	0	0	0	0
Aurora	0	0	0	0	0	0	0	0	0
Batangas	0	0	0	0	0	0	0	0	0
Cavite	0	0	0	0	0	0	0	0	0
Laguna	0	0	0	0	0	0	0	0	0
Occidental Mindoro	0	0	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0
Palawan	0	0	1	0	0	2	2	0	0
Quezon	0	0	0	0	0	0	0	0	0
Rizal	0	0	0	6	0	0	0	0	0
Romblon	0	0	0	0	0	0	0	0	0
Camarines Norte	0	0	0	0	0	0	0	0	0
Masbate	0	0	0	0	0	1	6	0	0
Sorsogon	0	0	0	0	0	0	0	0	0
Aklan	0	0	0	0	0	0	13	1	0
Antique	0	0	0	0	0	0	2	1	0
Capiz	0	0	1	0	0	0	5	3	0
Iloilo	0	0	0	0	0	0	7	8	0
Negros Occidenta	0	0	2	0	0	2	11	3	4
Bohol	0	0	0	0	0	0	5	1	1
Cebu	0	0	0	0	0	2	9	1	2
Negros Oriental	0	0	0	0	1	0	4	0	3
Eastern Samar	0	0	1	0	0	0	0	0	0
Leyte	0	0	0	0	0	1	10	0	3
Biliran	0	0	0	0	0	0	2	0	0
Northern Samar	0	0	0	0	0	0	0	0	0
Samar	0	0	1	0	2	0	0	0	0
Southern Leyte	0	0	0	0	0	0	0	0	0
Basilan	0	0	0	0	0	0	2	0	0
Sulu	0	0	0	0	0	0	0	0	0
Tawi-Tawi	0	0	0	0	0	0	0	1	0
Zamboanga del No	0	0	0	0	0	0	1	0	0
Zamboanga del Su	0	1	0	0	1	1	9	0	0
Agusan del Norte	0	0	0	0	0	0	0	0	1
Bukidnon	0	0	0	0	0	0	0	0	0
Camiguin	0	0	0	0	0	0	0	0	0
Misamis Occident	0	0	0	0	0	0	1	0	0
Misamis Oriental	0	0	0	0	0	0	6	0	0
Surigao del Nort	0	0	0	0	0	1	1	1	0
Davao	0	0	0	0	0	0	0	0	0
Davao del Sur	1	1	2	0	0	0	6	0	1
Davao Oriental	0	0	0	0	0	0	0	0	1
South Cotabato	0	0	4	0	0	1	2	0	0
Surigao del Sur	0	0	0	0	0	0	0	0	0
Lanao del Norte	0	0	0	0	0	0	1	0	0
Lanao del Sur	0	0	0	0	0	0	0	0	0
Maguindanao	0	0	0	0	0	0	0	0	0
Cotabato	0	0	0	0	0	0	0	0	0
Benguet	0	0	0	0	0	0	0	0	0
Kalinga-Apayao	0	0	0	0	0	0	0	0	0
Manila	0	0	0	7	0	0	0	0	0
Quezon City	0	0	0	2	0	0	0	0	0
Nakati	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0
TOTAL	1	2	12	15	4	11	105	20	16

	0305 Tarlac	0306 Zambales	0401 Aurora	0402 Batangas	0403 Cavite	0404 Laguna	0406 Occidental	0407 Oriental	0408 Mi Palawan
Ilocos Norte	0	0	0	0	0	0	0	0	0
Ilocos Sur	0	0	0	0	0	0	0	0	1
La Union	0	0	0	0	0	0	0	0	0
Pangasinan	0	0	0	0	0	0	0	0	4
Cagayan	0	0	0	0	0	0	0	0	0
Isabela	0	0	0	0	0	0	0	0	0
Nueva Vizcaya	0	0	0	0	0	0	0	0	0
Bataan	0	0	0	0	0	0	0	0	3
Bulacan	0	0	0	0	0	0	11	0	3
Nueva Ecija	0	0	0	0	0	0	9	0	4
Pampanga	0	0	0	0	0	0	0	0	5
Tarlac	0	0	0	0	0	0	0	0	3
Zambales	0	0	0	0	0	0	0	0	1
Aurora	0	0	0	0	0	0	0	0	0
Batangas	0	0	0	0	0	0	2	0	7
Cavite	0	0	0	0	0	0	6	3	5
Laguna	0	0	0	0	0	0	3	0	5
Occidental Mindo	0	0	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0
Palawan	1	0	0	0	0	1	0	0	0
Quezon	0	0	0	0	0	0	0	0	0
Rizal	0	0	0	0	0	0	2	0	8
Romblon	0	0	0	0	0	8	0	0	0
Camarines Norte	0	0	0	0	0	0	0	0	0
Masbate	0	0	0	3	3	0	0	0	0
Sorsogon	0	0	0	0	1	0	0	0	0
Aklan	1	0	0	1	5	10	0	0	0
Antique	0	0	0	0	1	0	0	0	0
Capiz	0	0	0	0	7	2	0	0	0
Iloilo	0	0	0	1	12	43	0	0	0
Negros Occidenta	0	0	0	3	7	6	0	0	0
Bohol	0	0	0	4	5	4	0	0	0
Cebu	1	2	0	1	12	8	0	0	0
Negros Oriental	1	0	0	0	3	4	0	0	0
Eastern Samar	0	0	0	0	0	0	0	0	0
Leyte	2	0	0	0	19	3	3	0	0
Biliran	0	0	0	0	0	0	0	0	0
Northern Samar	0	0	0	0	0	0	0	0	0
Samar	0	0	0	0	3	0	0	0	0
Southern Leyte	0	0	0	0	0	0	1	0	0
Basilan	0	0	0	0	0	1	0	0	0
Sulu	0	0	0	0	0	0	0	0	0
Tawi-Tawi	0	0	0	0	0	0	0	0	0
Zamboanga del No	0	0	0	0	2	1	0	0	0
Zamboanga del Su	0	2	0	0	5	2	0	0	2
Agusan del Norte	0	0	0	1	2	1	0	0	0
Bukidnon	0	0	0	0	1	0	0	0	0
Camiguin	0	0	0	0	0	0	0	0	0
Misamis Occident	0	0	0	0	3	0	0	0	0
Misamis Oriental	0	0	0	1	3	3	0	0	0
Surigao del Nort	0	2	0	0	10	12	0	0	0
Davao	0	0	0	0	0	0	0	0	1
Davao del Sur	0	0	0	1	5	4	0	0	0
Davao Oriental	0	1	0	0	0	3	0	0	0
South Cotabato	0	0	0	0	2	2	0	0	4
Surigao del Sur	0	0	0	0	0	0	0	0	0
Lanao del Norte	0	0	0	0	0	0	0	0	1
Lanao del Sur	0	0	0	0	0	0	0	0	2
Maguindanao	0	0	0	0	0	0	0	0	0
Cotabato	0	0	0	0	0	0	0	0	0
Benguet	0	0	0	0	0	0	0	0	1
Kalinga-Apayao	0	0	0	0	0	0	0	0	0
Manila	0	0	0	0	0	0	93	2	56
Quezon City	0	0	0	0	0	0	98	4	44
Kalococan City	1	0	0	0	0	0	48	2	19
Makati	1	0	1	0	0	0	44	1	28
Unknown	0	0	0	0	0	0	0	0	0
TOTAL	8	7	1	16	111	118	320	12	207

	0409	0410	0411	0503	0505	0506	0601	0602	0603
	Quezon	Rizal	Romblon	Camarines S	Masbate	Sorsogon	Aklan	Antique	Capiz
Ilocos Norte	0	0	0	0	0	0	0	0	0
Ilocos Sur	0	0	0	0	0	0	0	0	0
La Union	0	0	0	0	0	0	0	0	0
Pangasinan	0	0	1	0	2	0	0	0	0
Cagayan	0	0	0	0	0	0	0	0	0
Isabela	0	0	0	0	0	0	0	0	0
Nueva Vizcaya	0	0	0	0	0	0	0	0	0
Bataan	0	0	0	0	1	0	0	0	0
Bulacan	0	0	6	0	34	0	5	4	12
Nueva Ecija	0	0	0	0	3	0	2	0	0
Pampanga	0	0	0	0	3	0	1	1	2
Tarlac	0	0	0	0	2	0	1	0	1
Zambales	0	0	0	0	1	0	0	0	0
Aurora	0	0	1	0	0	0	0	0	0
Batangas	0	0	1	0	5	0	2	0	0
Cavite	0	0	23	0	2	0	3	1	19
Laguna	0	0	4	1	2	0	13	3	8
Occidental Mindo	0	0	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0
Palawan	0	1	0	0	0	0	0	0	0
Quezon	0	0	0	0	1	0	0	0	0
Rizal	0	0	5	0	16	0	8	7	10
Romblon	0	2	0	0	0	0	0	0	0
Camarines Norte	0	0	0	0	0	0	0	0	0
Masbate	0	10	0	0	1	0	0	0	0
Sorsogon	0	0	0	0	0	0	0	0	0
Aklan	1	9	0	0	0	0	0	0	0
Antique	0	2	0	0	0	0	0	0	0
Capiz	0	1	0	0	0	0	0	0	0
Iloilo	1	7	0	0	0	0	0	0	0
Negros Occidenta	1	11	0	0	0	0	0	0	0
Bohol	0	7	0	0	0	0	0	0	0
Cebu	5	6	0	0	0	0	0	0	0
Negros Oriental	0	2	0	0	0	0	0	0	0
Eastern Samar	0	0	0	0	0	0	0	0	0
Leyte	1	11	0	0	0	0	0	0	0
Biliran	0	0	0	0	0	0	0	0	0
Northern Samar	0	0	0	0	0	0	0	0	0
Samar	0	0	0	0	0	0	0	0	0
Southern Leyte	0	0	0	0	0	0	0	0	0
Basilan	0	0	0	0	0	0	0	0	0
Sulu	0	0	0	0	0	0	0	0	0
Tawi-Tawi	0	0	0	0	0	0	0	0	0
Zamboanga del No	0	1	0	0	0	0	0	0	0
Zamboanga del Su	0	1	1	0	0	0	0	0	0
Agusan del Norte	0	0	0	0	0	0	0	0	0
Bukidnon	0	2	0	0	0	0	0	0	0
Camiguin	0	0	0	0	0	0	0	0	0
Misamis Occident	0	7	0	0	0	0	0	0	0
Misamis Oriental	1	4	0	0	0	0	0	0	0
Surigao del Nort	2	5	0	0	0	0	0	0	0
Davao	0	0	0	0	0	0	0	0	0
Davao del Sur	1	1	0	0	0	0	0	0	0
Davao Oriental	0	0	0	0	0	0	0	0	0
South Cotabato	0	0	0	0	0	0	0	0	0
Surigao del Sur	0	0	0	0	0	0	0	0	0
Lanao del Norte	0	1	0	0	0	0	0	0	0
Lanao del Sur	0	0	0	0	0	0	0	0	0
Maguindanao	0	0	0	0	0	0	0	0	0
Cotabato	0	0	0	0	0	0	0	0	0
Benguet	0	0	0	0	5	0	0	0	2
Kalinga-Apayao	0	0	0	0	0	0	0	0	0
Manila	0	0	101	0	71	1	108	20	76
Quezon City	0	0	87	0	106	0	73	28	99
Kalococan City	0	0	38	0	56	0	55	17	43
Makati	0	0	52	0	30	0	52	30	38
Unknown	0	0	0	0	0	0	1	0	0
TOTAL	13	91	318	1	341	1	324	111	310

	0604 Iloilo	0605 Guimaras	0606 Negros Occi	0701 Bohol	0702 Cebu	0703 Negros Ori	0704 Siquijor	0801 Eastern Sam	0802 Leyte	
Ilocos Norte	7	0	0	0	0	0	0	0	0	0
Ilocos Sur	0	0	0	0	0	0	0	0	0	0
La Union	0	0	0	0	0	0	0	0	0	0
Pangasinan	3	0	1	3	2	0	0	0	0	0
Cagayan	0	0	2	1	1	0	0	0	0	0
Isabela	1	0	0	2	1	0	0	0	0	0
Nueva Vizcaya	0	0	4	0	0	1	0	0	0	1
Bataan	1	0	4	0	4	3	0	0	0	0
Bulacan	16	2	36	2	20	30	0	0	0	1
Nueva Ecija	6	0	9	1	12	1	0	0	0	24
Pampanga	7	0	37	2	18	1	0	0	0	0
Tarlac	4	0	4	2	4	7	0	0	0	5
Zambales	4	0	1	0	7	3	0	0	0	8
Aurora	0	0	0	0	1	0	0	0	0	3
Batangas	6	0	22	1	13	8	0	0	0	0
Cavite	25	2	41	1	32	21	0	1	0	9
Laguna	22	0	33	9	22	5	0	0	0	26
Occidental Mindo	0	0	0	0	1	0	0	0	0	11
Oriental Mindoro	0	0	0	2	0	0	0	0	0	0
Palawan	0	0	0	0	0	2	0	0	0	0
Quezon	1	0	0	0	8	0	0	0	0	1
Rizal	10	0	32	2	28	7	0	0	0	1
Romblon	0	0	0	0	6	0	0	0	0	28
Camarines Norte	0	0	0	1	0	0	0	0	0	0
Masbate	0	0	0	0	0	0	0	0	0	0
Sorsogon	0	0	0	0	0	0	0	0	0	1
Aklan	0	0	0	0	0	0	0	0	0	0
Antique	0	0	0	0	0	0	0	0	0	0
Capiz	0	0	0	0	0	0	0	0	0	0
Iloilo	0	0	0	0	0	0	0	0	0	0
Negros Occidenta	0	0	0	0	0	0	0	0	0	0
Bohol	0	0	0	0	0	0	0	0	0	0
Cebu	0	0	0	0	0	0	0	0	0	0
Negros Oriental	0	0	0	0	0	0	0	0	0	0
Eastern Samar	0	0	0	0	0	0	0	0	0	0
Leyte	0	0	0	0	0	0	0	0	0	0
Siliran	0	0	0	0	0	0	0	0	0	0
Northern Samar	0	0	0	0	0	0	0	0	0	0
Samar	0	0	0	0	0	0	0	0	0	0
Southern Leyte	0	0	0	0	0	0	0	0	0	0
Basilan	0	0	0	0	0	0	0	0	0	0
Sulu	0	0	0	0	0	0	0	0	0	0
Tawi-Tawi	0	0	0	0	0	0	0	0	0	0
Zamboanga del No	0	0	0	0	0	0	0	0	0	0
Zamboanga del Su	0	0	0	0	0	0	0	0	0	0
Agusan del Norte	0	0	0	0	0	0	0	0	0	0
Bukidnon	0	0	0	0	0	0	0	0	0	0
Camiguin	0	0	0	0	0	0	0	0	0	0
Misamis Occident	0	0	0	0	0	0	0	0	0	0
Misamis Oriental	0	0	0	0	0	0	0	0	0	0
Surigao del Nort	0	0	0	0	0	0	0	0	0	0
Davao	0	0	0	0	1	0	0	0	0	0
Davao del Sur	0	0	0	0	0	0	0	0	0	0
Davao Oriental	0	0	0	0	0	0	0	0	0	0
South Cotabato	0	0	0	0	0	0	0	0	0	0
Surigao del Sur	0	0	0	0	0	0	0	0	0	0
Lanao del Norte	0	0	0	0	0	0	0	0	0	0
Lanao del Sur	0	0	0	0	0	0	0	0	0	0
Maguindanao	0	0	0	1	0	0	0	0	0	0
Cotabato	0	0	0	0	0	0	0	0	0	0
Benguet	1	0	2	2	8	2	0	0	0	1
Kalinga-Apayao	0	0	0	0	0	2	0	0	0	0
Manila	128	3	173	40	222	60	2	4	0	191
Quezon City	159	5	255	38	259	77	0	2	0	236
Kaloccan City	53	0	70	16	70	26	0	0	0	101
Makati	135	3	222	20	211	73	0	3	0	164
Unknown	0	0	0	0	0	0	0	0	0	0
TOTAL	589	15	948	146	952	329	2	10	0	812

	0803 Biliran	0804 Northern Sa	0805 Samar	0806 Southern Le	0901 Basilan	0902 Sulu	0903 Tawi-Tawi	0904 Zamboanga d	0905 Zamboanga d
Ilocos Norte	0	0	0	0	0	0	0	0	0
Ilocos Sur	0	0	0	0	0	0	0	0	1
La Union	0	0	0	0	0	0	0	0	1
Pangasinan	0	0	0	0	0	0	0	0	1
Cagayan	0	0	0	0	0	0	0	0	1
Isabela	0	0	0	0	0	0	0	0	0
Nueva Uizcaya	0	0	0	0	0	0	0	0	1
Bataan	0	0	0	0	0	0	0	0	1
Bulacan	0	0	6	0	0	0	0	6	1
Nueva Ecija	0	0	0	0	0	0	0	1	4
Pampanga	0	0	0	0	0	0	0	0	2
Tarlac	0	0	4	0	0	0	0	0	0
Zambales	0	0	1	0	0	0	0	0	8
Aurora	0	0	0	0	0	0	0	0	0
Batangas	0	0	1	0	0	0	0	2	8
Cavite	0	0	3	0	0	0	0	2	1
Laguna	0	0	2	0	0	0	1	0	5
Occidental Mindo	0	0	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0
Palawan	0	0	0	0	0	0	0	1	0
Quezon	0	0	0	0	0	0	0	0	0
Rizal	0	0	2	0	0	0	0	0	7
Romblon	0	0	0	0	0	0	0	0	0
Camarines Norte	0	0	0	0	0	0	0	0	0
Masbate	0	0	0	0	0	0	0	0	0
Sorsogon	0	0	0	0	0	0	0	0	0
Aklan	0	0	0	0	0	0	0	0	0
Antique	0	0	0	0	0	0	0	0	0
Cepiz	0	0	0	0	0	0	0	0	0
Iloilo	0	0	0	0	0	0	0	0	0
Negros Occidenta	0	0	0	0	0	0	0	0	0
Bohol	0	0	0	0	0	0	0	0	0
Cebu	0	0	0	0	0	0	0	0	0
Negros Oriental	0	0	0	0	0	0	0	0	0
Eastern Samar	0	0	0	0	0	0	0	0	0
Leyte	0	0	0	0	0	0	0	0	0
Biliran	0	0	0	0	0	0	0	0	0
Northern Samar	0	0	0	0	0	0	0	0	0
Samar	0	0	0	0	0	0	0	0	0
Southern Leyte	0	0	0	0	0	0	0	0	0
Basilan	0	0	0	0	0	0	0	0	0
Sulu	0	0	0	0	0	0	0	0	0
Tawi-Tawi	0	0	0	0	0	0	0	0	0
Zamboanga del No	0	0	0	0	0	0	0	0	0
Zamboanga del Su	0	0	0	0	0	0	0	0	0
Agusan del Norte	0	0	0	0	0	0	0	0	0
Bukidnon	0	0	0	0	0	0	0	0	0
Camiguin	0	0	0	0	0	0	0	0	0
Misamis Occident	0	0	0	0	0	0	0	0	0
Misamis Oriental	0	0	0	0	0	0	0	0	0
Surigao del Nort	0	0	0	0	0	0	0	0	0
Davao	0	0	0	0	0	0	0	0	0
Davao del Sur	0	0	0	0	0	0	0	0	0
Davao Oriental	0	0	0	0	0	0	0	0	0
South Cotabato	0	0	0	0	0	0	0	0	0
Surigao del Sur	0	0	0	0	0	0	0	0	0
Lanao del Norte	0	0	0	0	0	0	0	0	0
Lanao del Sur	0	0	0	0	0	0	0	0	0
Maguindanao	0	0	0	0	0	0	0	0	0
Cotabato	0	0	0	0	0	0	0	0	0
Benguet	0	0	0	0	0	0	0	0	0
Kalinga-Apayao	0	0	0	0	0	0	0	0	0
Manila	0	1	13	5	1	1	1	13	58
Quezon City	1	1	21	3	1	1	0	21	77
Kaloccan City	1	1	13	3	0	0	0	4	21
Makati	0	0	3	2	1	3	1	21	61
Unknown	0	0	0	0	0	0	0	0	0
TOTAL	2	3	69	13	3	5	3	71	259

	1001	1002	1003	1004	1005	1006	1007	1101	1102
	Agusan del	Agusan del	Bukidnon	Camiguin	Misamis Occ	Misamis Ori	Surigao del	Davao	Davao del S
Ilocos Norte	0	0	1	0	0	4	0	1	0
Ilocos Sur	0	0	0	0	0	1	2	0	7
La Union	0	0	0	0	0	0	0	0	0
Pangasinan	0	0	0	0	0	0	1	0	1
Cagayan	0	0	0	0	0	1	0	0	0
Isabela	0	1	0	0	0	0	0	0	0
Nueva Vizcaya	0	0	0	0	0	0	0	0	0
Bataan	0	0	1	0	0	5	0	0	1
Bulacan	4	0	0	0	2	13	2	2	3
Nueva Ecija	4	0	0	0	3	4	1	1	6
Pampanga	2	0	0	0	0	4	2	0	4
Tarlac	0	0	0	0	2	4	1	0	2
Zambales	0	0	0	0	0	0	0	0	0
Aurora	0	0	0	0	0	0	0	0	0
Batangas	1	0	0	0	4	3	3	1	5
Cavite	12	0	0	0	1	14	15	0	8
Laguna	5	0	0	0	2	6	8	0	2
Occidental Mindo	0	0	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0
Palawan	0	0	0	0	2	0	0	0	0
Quezon	0	0	7	0	0	0	0	0	3
Rizal	14	1	1	0	5	4	4	3	7
Romblon	0	0	0	0	0	0	0	0	0
Camarines Norte	0	0	0	0	0	0	0	0	0
Masbate	0	0	0	0	0	0	0	0	0
Sorsogon	0	0	0	0	0	0	0	0	0
Aklan	0	0	0	0	0	0	0	0	0
Antique	0	0	0	0	0	0	0	0	0
Capiz	0	0	0	0	0	0	0	0	0
Iloilo	0	0	0	0	0	0	0	0	0
Negros Occidenta	0	0	0	0	0	0	0	0	0
Bohol	0	0	0	0	0	0	0	0	0
Cebu	0	0	0	0	0	0	0	0	0
Negros Oriental	0	0	0	0	0	0	0	0	0
Eastern Samar	0	0	0	0	0	0	0	0	0
Leyte	0	0	0	0	0	0	0	0	0
Billiran	0	0	0	0	0	0	0	0	0
Northern Samar	0	0	0	0	0	0	0	0	0
Samar	0	0	0	0	0	0	0	0	0
Southern Leyte	0	0	0	0	0	0	0	0	0
Basilan	0	0	0	0	0	0	0	0	0
Sulu	0	0	0	0	0	0	0	0	0
Tawi-Tawi	0	0	0	0	0	0	0	0	0
Zamboanga del No	0	0	0	0	0	0	0	0	0
Zamboanga del Su	0	0	0	0	0	0	0	0	0
Agusan del Norte	0	0	0	0	0	0	0	0	0
Bukidnon	0	0	0	0	0	0	0	0	0
Camiguin	0	0	0	0	0	0	0	0	0
Misamis Occident	0	0	0	0	0	0	0	0	1
Misamis Oriental	0	0	0	0	0	0	0	0	0
Surigao del Nort	0	0	0	0	0	0	0	1	0
Davao	0	0	0	0	0	0	0	0	0
Davao del Sur	0	0	0	0	0	0	0	0	0
Davao Oriental	0	0	0	0	0	0	0	0	0
South Cotabato	0	0	0	0	0	0	1	0	0
Surigao del Sur	0	0	0	0	0	0	0	0	0
Lanao del Norte	0	0	0	0	0	0	0	0	0
Lanao del Sur	0	0	0	0	0	0	0	0	0
Maguindanao	0	0	0	0	0	0	0	0	0
Cotabato	0	0	0	0	0	0	0	0	0
Benguet	0	0	0	0	0	1	0	0	0
Kalinga-Apayao	0	0	0	0	0	0	0	0	0
Manila	45	0	2	1	11	190	42	7	62
Quezon City	52	4	11	0	32	60	74	4	62
Kalocan City	21	0	0	0	10	15	22	2	17
Makati	33	7	0	0	25	67	27	5	39
Unknown	0	0	0	0	0	0	0	0	0
TOTAL	193	13	23	1	99	396	205	27	230

	1103	1104	1105	1201	1202	1203	1204	1205	1302
	Davao	Orien	South Cotab	Surigao del	Lanao del N	Lanao del S	Maguindanao	Cotabato	Sultan Kuda Benguet
Ilocos Norte	0	0	0	0	0	0	0	0	0
Ilocos Sur	0	3	0	0	2	0	0	0	0
La Union	0	1	0	0	0	0	0	0	1
Pangasinan	0	0	0	0	1	0	0	0	0
Cagayan	0	0	0	0	0	0	0	0	0
Isabela	0	0	0	0	0	0	0	0	0
Nueva Vizcaya	0	0	0	0	0	0	0	0	0
Bataan	1	0	0	0	0	0	0	0	0
Bulacan	1	5	0	0	0	0	0	0	0
Nueva Ecija	0	1	0	0	0	1	0	0	0
Pampanga	0	0	0	0	0	0	0	0	0
Tarlac	0	2	0	0	0	0	0	0	1
Zambales	0	3	0	0	0	0	0	0	0
Aurora	0	0	0	0	0	0	0	0	0
Batangas	0	1	0	0	0	1	0	1	0
Cavite	1	2	0	0	4	3	0	0	0
Laguna	0	6	0	0	9	0	0	0	0
Occidental Mindo	0	0	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0
Palawan	0	1	0	0	0	0	0	0	0
Quezon	0	1	0	0	0	0	0	0	0
Rizal	1	5	1	2	0	0	0	0	0
Romblon	0	0	0	0	0	0	0	0	0
Camarines Norte	0	1	0	0	0	0	0	0	0
Marbato	0	0	0	0	0	0	0	0	0
Sorsogon	0	0	0	0	0	0	0	0	0
Aklan	0	0	0	0	0	0	0	0	0
Antique	0	0	0	0	0	0	0	0	0
Capiz	0	0	0	0	0	0	0	0	0
Iloilo	0	0	0	0	0	0	0	0	0
Negros Occidenta	0	0	0	0	0	0	0	0	1
Bohol	0	0	0	0	0	0	0	0	0
Cebu	0	0	0	0	0	0	0	0	0
Negros Oriental	0	0	0	0	0	0	0	0	0
Eastern Samar	0	0	0	0	0	0	0	0	0
Leyte	0	0	0	0	0	0	0	0	0
Biliran	0	0	0	0	0	0	0	0	0
Northern Samar	0	0	0	0	0	0	0	0	0
Samar	0	0	0	0	0	0	0	0	0
Southern Leyte	0	0	0	0	0	0	0	0	0
Basilan	0	0	0	0	0	0	0	0	0
Sulu	0	0	0	0	0	0	0	0	0
Tawi-Tawi	0	0	0	0	0	0	0	0	0
Zamboanga del No	0	0	0	0	0	0	0	0	0
Zamboanga del Su	0	0	0	0	0	0	0	0	0
Agusan del Norte	0	0	0	0	0	0	0	0	0
Bukidnon	0	0	0	0	0	0	0	0	0
Camiguin	0	0	0	0	0	0	0	0	0
Misamis Occident	0	0	0	0	0	0	0	0	0
Misamis Oriental	0	0	0	0	0	0	0	0	0
Surigao del Nort	0	0	0	0	0	0	0	0	1
Davao	0	0	0	0	0	0	0	0	0
Davao del Sur	0	0	0	0	0	0	0	0	2
Davao Oriental	0	0	0	0	0	0	0	0	0
South Cotabato	0	1	0	0	0	0	0	0	0
Surigao del Sur	0	0	0	0	0	0	0	0	0
Lanao del Norte	0	0	0	0	0	0	0	0	0
Lanao del Sur	0	0	0	0	0	0	0	0	0
Maguindanao	0	0	0	0	0	0	0	0	0
Cotabato	0	0	0	0	0	0	0	0	0
Benguet	0	2	0	1	0	0	0	0	0
Kalinga-Apayao	0	0	0	0	0	0	0	0	0
Manila	7	50	3	19	4	0	0	0	0
Quezon City	2	49	4	19	2	1	1	0	0
Kaloocan City	0	7	0	4	2	0	1	0	0
Makati	1	21	2	6	6	0	2	0	0
Unknown	0	0	0	0	0	0	0	0	0
TOTAL	14	162	10	67	19	1	4	2	4

	1401 Manila	1402 Quezon City	1403 Kaloocan CI	1404 Makati	9999 Unknown	TOTAL
Ilocos Norte	0	0	0	0	0	13
Ilocos Sur	0	0	0	0	0	17
La Union	0	0	0	0	0	3
Pangasinan	0	0	0	0	0	20
Cagayan	0	0	0	0	0	6
Isabela	0	0	0	0	0	7
Nueva Vizcaya	0	0	0	0	0	5
Bataan	0	0	0	0	0	26
Bulacan	0	0	0	0	0	250
Nueva Ecija	0	0	0	0	0	73
Pampanga	0	0	0	0	0	96
Tarlac	0	0	0	0	0	52
Zambales	0	0	0	0	0	32
Aurora	0	0	0	0	0	2
Batangas	0	0	0	0	0	107
Cavite	0	0	0	0	0	277
Laguna	0	0	0	0	0	187
Occidental Mindo	9	6	4	5	0	26
Oriental Mindoro	0	0	0	0	0	2
Palawan	4	17	8	3	0	47
Quezon	0	0	0	0	0	22
Rizal	0	0	0	0	0	226
Rombion	46	45	17	11	0	135
Camarines Norte	0	0	0	0	0	2
Masbate	31	44	39	21	0	160
Sorsogon	0	0	0	0	0	1
Aklan	120	82	43	51	0	337
Antique	4	26	1	11	0	48
Capiz	18	50	15	50	0	152
Iloilo	85	100	44	99	0	407
Negros Occidenta	50	50	14	56	0	221
Bohol	67	68	34	62	0	258
Cebu	106	128	33	99	2	417
Negros Oriental	22	37	9	19	0	105
Eastern Samar	5	0	0	0	0	6
Leyte	107	155	79	80	0	474
Biliran	4	5	1	0	0	12
Northern Samar	1	5	1	0	0	7
Samar	8	9	7	2	0	32
Southern Leyte	0	0	0	0	0	1
Basilan	0	4	0	0	0	7
Sulu	0	3	0	1	0	4
Tawi-Tawi	0	0	0	0	0	1
Zamboanga del No	8	6	1	12	0	32
Zamboanga del Su	47	32	3	29	0	136
Agusan del Norte	0	0	1	1	0	7
Bukidnon	0	1	0	0	0	4
Camiguin	1	1	0	2	0	4
Misamis Occident	12	14	3	12	0	53
Misamis Oriental	28	40	6	14	0	106
Surigao del Nort	29	56	11	23	0	155
Davao	3	17	5	1	0	28
Davao del Sur	32	70	2	32	0	162
Davao Oriental	3	4	0	1	0	13
South Cotabato	21	17	1	13	0	69
Surigao del Sur	2	2	0	1	0	5
Lanao del Norte	7	7	3	7	0	27
Lanao del Sur	0	0	0	1	0	3
Maguindanao	0	0	0	0	0	1
Cotabato	1	1	0	2	0	4
Benguet	0	0	0	0	0	28
Kalinga-Apayao	0	0	0	0	0	2
Manila	0	0	0	0	0	1894
Quezon City	2	0	0	0	0	2077
Kaloocan City	0	0	0	0	0	757
Makati	0	0	0	1	0	1442
Unknown	0	0	0	0	1	2
TOTAL	883	1,102	385	722	3	11233

Appendix A-7 Cargo Volume Related to FTI and EPZ
 South Harbor Commodity Volume
 (OD of selected companies)

Commodity	Origin	Destination	Commodity Weight	Sub Total	1991 S. Harbor Volume	%
3	F.T.I.	Taiwan	12,500			
				12,500	1,059,538	1.18
3	Japan	F.T.I.	12,000			
3	Japan	F.T.I.	12,000			
3	Japan	F.T.I.	7,800			
				31,800	1,059,538	3.00
4	Japan	F.T.I.	20,000			
				20,000	480,895	4.16
4	New Zealan	F.T.I.	20,000			
				20,000	480,895	4.16
4	Pier 13	F.T.I.	20,000			
4	Pier 13	F.T.I.	7,000			
				27,000	480,895	5.61
4	Singapore	F.T.I.	19,000			
				19,000	480,895	3.95
4	Taiwan	F.T.I.	20,000			
				20,000	480,895	4.16
4	Thailand	F.T.I.	15,000			
				15,000	480,895	3.12
4	Vietnam	F.T.I.	9,000			
4	Vietnam	F.T.I.	20,000			
4	Vietnam	F.T.I.	20,000			
4	Vietnam	F.T.I.	20,000			
4	Vietnam	F.T.I.	9,000			
4	Vietnam	F.T.I.	20,000			
4	Vietnam	F.T.I.	10,000			
4	Vietnam	F.T.I.	9,000			
4	Vietnam	F.T.I.	13,000			
4	Vietnam	F.T.I.	12,000			
				142,000	480,895	29.53
7	F.T.I.	Hongkong	11,000			
7	F.T.I.	Hongkong	10,000			
				21,000	687,086	3.06
7	Taiwan	F.T.I.	500			
				500	687,086	0.07
10	U.S.A.	F.T.I.	18,000			
				18,000	171,000	10.53
11	Taiwan	Epza Cavite	1,720			
				1,720	396,420	0.43
24	F.T.I.	Hamburg	20,000			
				20,000	1,922,535	1.04
24	Taiwan	F.T.I.	22,000			
				22,000	1,922,535	1.14
26	Hongkong	F.T.I.	11,940			
				11,940	449,490	2.66
26	Japan	F.T.I.	2,500			
				2,500	449,490	0.56
26	Taiwan	F.T.I.	22,000			
26	Taiwan	F.T.I.	22,000			
29	Taiwan	F.T.I.	7,725			
				51,725	449,490	11.51
51	Taiwan	F.T.I.	12,000			
				12,000	4,493,053	0.27

Appendix A-7 Cargo Volume Related to FTI and EPZ

South Harbor Commodity Volume
(OD of selected companies)

Commodity	Origin	Destination	Commodity Weight	Sub Total	1991 S. Harbor Volume	%
62	Epza Bataan	Epza Cavite	5,750			
62	Epza Bataan	Epza Manila	20,000			
				25,750	2,367,815	1.09
62	Hongkong	F.T.I.	15,000			
62	Hongkong	F.T.I.	10,000			
				25,000	2,367,815	1.06
62	Japan	Epza Bataa	1,050			
62	Japan	F.T.I.	9,975			
62	Japan	F.T.I.	10,125			
62	Japan	F.T.I.	1,800			
				22,950	2,637,815	0.97
62	Korea	F.T.I.	2,000			
62	Korea	F.T.I.	2,000			
				4,000	2,367,815	0.17
62	Pier 13	F.T.I.	450			
62	Pier 13	F.T.I.	450			
62	Pier 13	F.T.I.	12,000			
				12,900	2,367,815	0.54
62	Taiwan	F.T.I.	20,000			
				20,000	2,367,815	0.84
65	Taiwan	F.T.I.	525			
				525	183,700	0.29
71	Japan	F.T.I.	600			
				600	2,551,001	0.02
71	Pier 5	Epza Cavite	20,000			
				20,000	2,551,001	0.78
71	Taiwan	Epza Bataan	2,000			
				2,000	2,551,001	0.08
71	Thailand	F.T.I.	600			
				600	2,511,001	0.02
91	Epza Cavite	China	20,000			
91	Epza Cavite	MICT	20,000			
91	Epza Cavite	MICT	20,000			
				60,000	6,537,066	0.92
91	Epza Manila	Epza Bataa	2,000			
				2,000	6,537,066	0.03
91	Japan	F.T.I.	21,000			
				21,000	6,537,066	0.32
91	Korea	Epza Cavite	22,000			
91	Korea	F.T.I.	10,000			
				32,000	6,537,066	0.49
91	Taiwan	Epza Cavite	20,000			
91	Taiwan	F.T.I.	2,400			
91	Taiwan	F.T.I.	10,200			
91	Taiwan	F.T.I.	2,300			
				34,900	6,537,066	0.53
91	U.K.	F.T.I.	6,000			
				6,000	6,537,066	0.09
99	F.T.I.	Japan	2,000			
				2,000	115,600	1.73

Appendix A-7 Cargo Volume Related to FTI and EPZ

MICT Commodity Volume
(OD of selected companies)

Commodity	Origin	Destination	Commodity Weight	Sub Total	1991 MICT Volume	%
3	F.T.I.	Japan	21,000			
3	F.T.I.	Japan	21,000	42,000	801,250	5.24
7	F.T.I.	Bangkok	21,000			
7	F.T.I.	Bangkok	21,000			
7	F.T.I.	Hongkong	21,000			
7	F.T.I.	Hongkong	21,000			
7	F.T.I.	Japan	21,000			
7	F.T.I.	Tokyo	21,000			
7	F.T.I.	U.S.A.	21,000	147,000	3,538,820	4.15
24	Australia	Epza, Cavite	21,000	21,000	3,354,120	0.63
25	F.T.I.	Japan	21,000	21,000	1,209,500	1.74
26	Korea	Epza, Cavite	21,000	21,000	1,567,500	1.34
26	Taiwan	Epza, Cavite	21,000	21,000	1,567,500	1.34
29	Australia	Epza, Cavite	21,000	21,000	861,500	2.44
29	F.T.I.	Australia	12,000	12,000	861,500	1.39
51	Australia	Epza, Cavite	21,000			
51	Australia	Epza, Cavite	21,000			
51	Australia	Epza, Cavite	21,000	63,000	5,125,050	1.23
51	Epza, Bataan	Mexico	21,000	21,000	5,125,050	0.41
62	F.T.I.	Bangkok	21,000	21,000	4,199,070	0.50
71	Bangkok	F.T.I.	20,000	20,000	3,599,605	0.56
71	Epza, Cavite	Singapore	21,000	21,000	3,599,605	0.58
71	F.T.I.	California	21,000			
71	F.T.I.	California	21,000			
71	F.T.I.	Hongkong	21,000	63,000	3,599,605	1.75
71	Singapore	Epza, Cavite	21,000			
71	Singapore	Epza, Cavite	21,000			
71	Singapore	Epza, Cavite	21,000	63,000	3,599,605	1.75
71	Taiwan	F.T.I.	20,000	20,000	3,599,605	0.56
91	Area 6 MICT	Epza, Cavite	20,000			
91	C.Y. MICT	F.T.I.	21,000	41,000	13,201,190	0.31
91	Epza, Cavite	Singapore	21,000			
91	Epza, Cavite	Singapore	21,000			
91	Epza, Cavite	U.S.A.	21,000	63,000	13,201,190	0.48
91	Europe	F.T.I.	20,000	20,000	13,201,190	0.15
91	F.T.I.	Bangkok	21,000			
91	F.T.I.	Hongkong	21,000			
91	F.T.I.	Japan	21,000			
91	F.T.I.	U.S.A.	21,000			
91	F.T.I.	U.S.A.	21,000			
91	F.T.I.	U.S.A.	21,000	126,000	13,201,190	0.95
91	R8 MICT	F.T.I.	20,000			
91	R8 MICT	F.T.I.	10,000	30,000	13,201,190	0.23
99	Area G MICT	Epza, Cavite	20,000	20,000	95,000	21.05

PART II

APPENDIX A-1

Tide Harmonic Constants at Naic/Cavite

Latitude : 14 deg 19' N
 Longitude: 120 deg 44' E

Time Zone: local
 (GMT+8)

Recordings from: 1200 23/11/93 to 1800 27/12/93

CONSTANT	FREQUENCY (cyc/hr)	AMPLITUDE (m)	PHASE (deg)
Z0	.00000000	.5657	.00
MM	.00151215	.0159	243.47
MSF	.00282193	.0115	97.99
ALP1	.03439657	.0055	114.42
2Q1	.03570635	.0195	286.47
Q1	.03721850	.0593	248.63
O1	.03873065	.2481	269.83
NO1	.04026860	.0201	176.35
P1	.04155259	.0726	308.36
K1	.04178075	.2614	312.26
J1	.04329290	.0123	104.04
OO1	.04483084	.0189	157.80
UPS1	.04634299	.0201	196.67
EPS2	.07617731	.0123	205.11
MU2	.07768947	.0105	71.43
N2	.07899925	.0348	261.54
M2	.08051140	.1401	298.85
L2	.08202355	.0132	182.38
S2	.08333334	.0329	345.94
K2	.08356149	.0098	336.84
ETA2	.08507364	.0123	208.27
MO3	.11924210	.0095	76.33
M3	.12076710	.0088	178.14
MG3	.12229210	.0092	179.03
SK3	.12511410	.0118	140.78
MN4	.15951060	.0047	170.44
M4	.16102280	.0064	137.78
SN4	.16233260	.0062	261.67
MS4	.16384470	.0081	210.06
S4	.16666670	.0062	27.73
2MK5	.20280360	.0033	158.25
2SK5	.20844740	.0035	289.40
2MN6	.24002200	.0033	102.22
M6	.24153420	.0039	94.37
2MS6	.24435610	.0016	251.67
2SM	.24717810	.0016	165.48
3MK7	.28331490	.0032	329.20
M8	.32204560	.0013	179.44

APPENDIX A-2 East-West and North-south Current Harmonic Constants

EAST - WEST CURRENTS

HARMONIC CONSTANTS FOR NAIC, CAVITE (PHILIPPINES)

Latitude : 14 deg 20' N Time Zone: local
 Longitude: 120 deg 43' E (GMT+8)

Recordings from: 1300 3/01/94 to 1000 21/01/94

CONSTANT	FREQUENCY (cyc/hr)	AMPLITUDE (m)	PHASE (deg)
Z0	.00000000	.0402	180.00
MSF	.00282193	.0326	13.61
O1	.03873065	.0213	144.24
P1	.04155259	.0059	171.81
K1	.04178075	.0212	175.71
M2	.08051140	.0387	176.91
S2	.08333334	.0177	228.74
K2	.08356149	.0053	219.64
M3	.12076710	.0034	129.50
SK3	.12511410	.0017	281.34
M4	.16102280	.0029	269.45
MS4	.16384470	.0051	321.66
S4	.16666670	.0012	48.28
2MK5	.20280360	.0015	49.37
2SK5	.20844740	.0005	163.52
M6	.24153420	.0005	111.17
2MS6	.24435610	.0026	233.51
2SM6	.24717810	.0019	255.70
3MK7	.28331490	.0004	246.64
M8	.32204560	.0004	213.95

NORTH - SOUTH CURRENTS

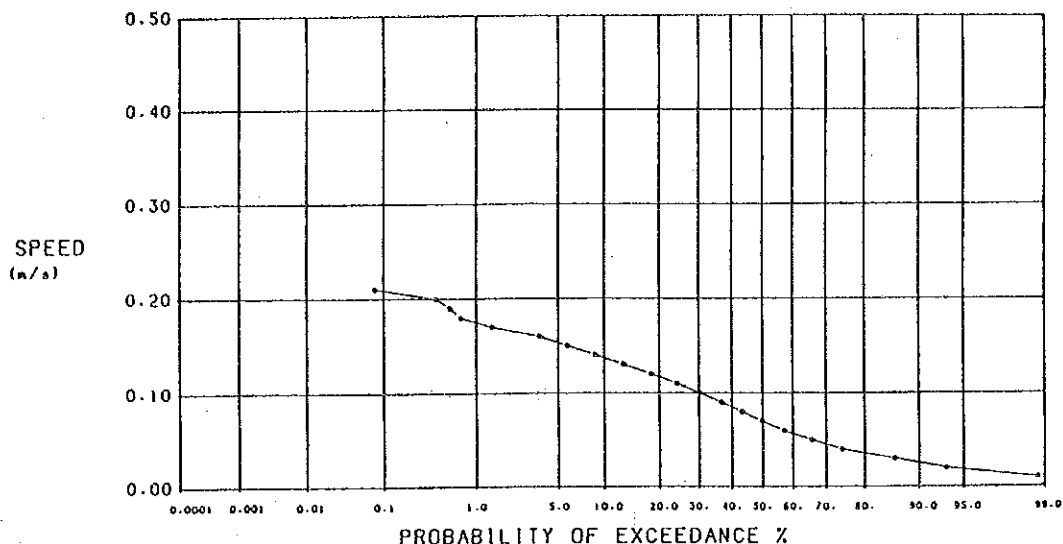
HARMONIC CONSTANTS FOR NAIC, CAVITE (PHILIPPINES)

Latitude : 14 deg 20' N Time Zone: local
 Longitude: 120 deg 43' E (GMT+8)

Recordings from: 1300 3/01/94 to 1000 21/01/94

CONSTANT	FREQUENCY (cyc/hr)	AMPLITUDE (m)	PHASE (deg)
Z0	.00000000	.0255	180.00
MSF	.00282193	.0303	321.83
O1	.03873065	.0129	140.64
P1	.04155259	.0053	175.26
K1	.04178075	.0192	179.16
M2	.08051140	.0204	170.60
S2	.08333334	.0055	222.39
K2	.08356149	.0016	213.29
M3	.12076710	.0009	21.66
SK3	.12511410	.0032	253.15
M4	.16102280	.0020	270.38
MS4	.16384470	.0022	338.07
S4	.16666670	.0007	287.92
2MK5	.20280360	.0028	42.21
2SK5	.20844740	.0024	202.18
M6	.24153420	.0007	159.65
2MS6	.24435610	.0013	295.99
2SM6	.24717810	.0018	349.29
3MK7	.28331490	.0005	243.54
M8	.32204560	.0019	288.27

APPENDIX A-3 Probability of Current Speed Exceedance at Naic/Cavite



CURRENT SPEED - DIRECTION FREQUENCY MATRIX.

LAWSON & TRELOR Pty Ltd.

CLIENT : TRINAV SURVEYS

DATA START TIME : 1220 03:01:94

LOCATION : NAIC, CAVITE

DATA END TIME : 1030 21:01:94

LATITUDE : 24 deg 20' N
LONGITUDE : 120 deg 43' E

RUN DATE : 01:02:94

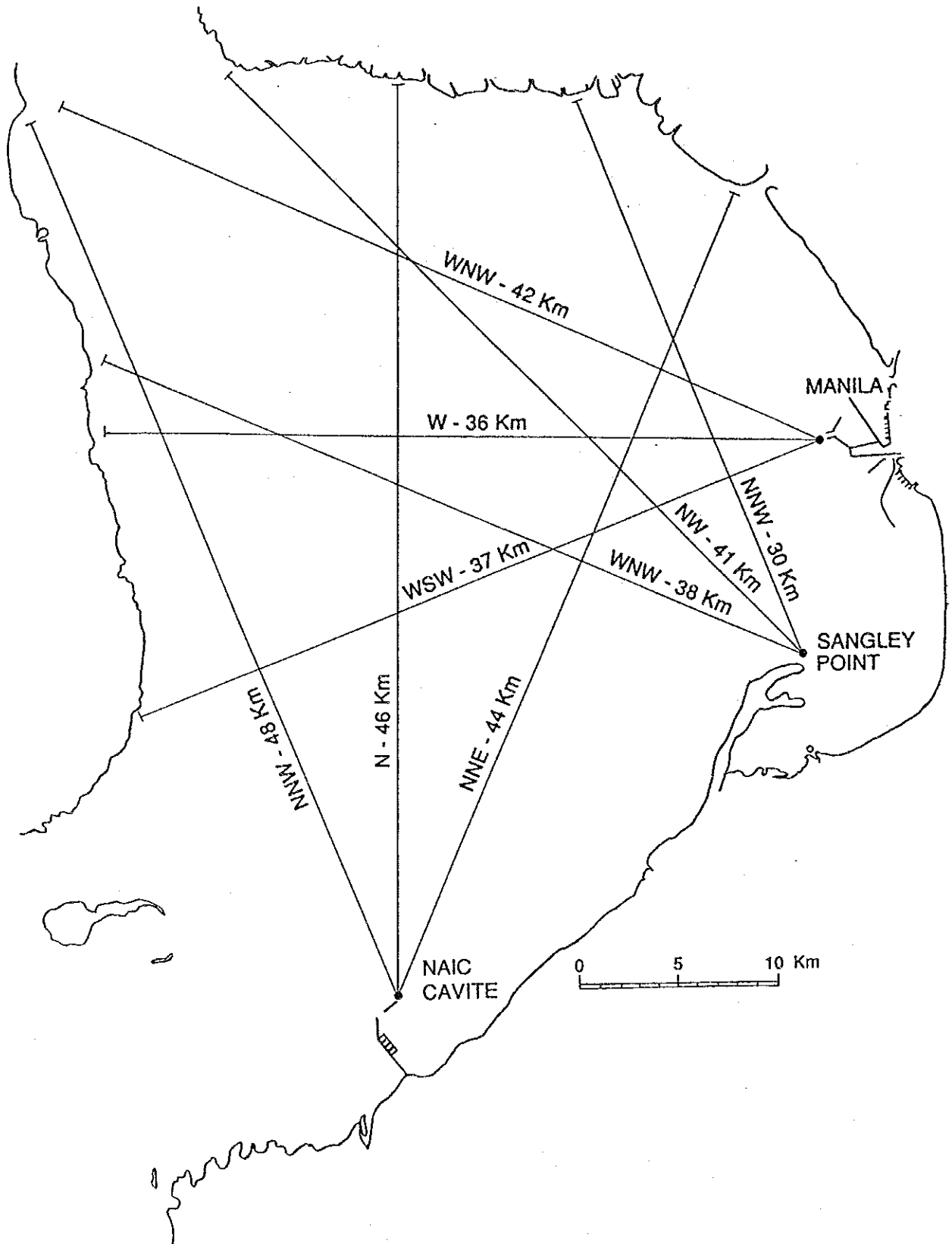
SPEED (m/s) :

DIRECTION (DEGS)	.00+	.05+	.10+	.15+	.20+	.25+	.30+	.35+	.40+	.45+	.50+	TOTALS x
348.8 - 11.3 :	1.48	.47										1.95
11.3 - 33.8 :	1.71	1.09	.16									2.96
33.8 - 56.3 :	.86	1.32	.47	.23								2.88
56.3 - 78.8 :	1.32	1.87	.93									4.12
78.8 - 101.3 :	.78	.23										1.01
101.3 - 123.8 :	.93	.16										1.09
123.8 - 146.3 :	.93	.31										1.25
146.3 - 168.8 :	1.63	.54										2.18
168.8 - 191.3 :	2.02	1.32										3.35
191.3 - 213.8 :	2.02	2.96	1.71	.08								6.77
213.8 - 236.3 :	3.19	9.88	12.37	2.41								27.86
236.3 - 258.8 :	3.74	9.73	8.48	2.65	.39							24.98
258.8 - 281.3 :	3.81	4.20	.54									8.56
281.3 - 303.8 :	3.66	.62										4.28
303.8 - 326.3 :	3.42	.47										3.89
326.3 - 348.8 :	2.65	.23										2.88
TOTALS x :	34.16	35.41	24.67	5.37	.39	.00	.00	.00	.00	.00	.06	100.00

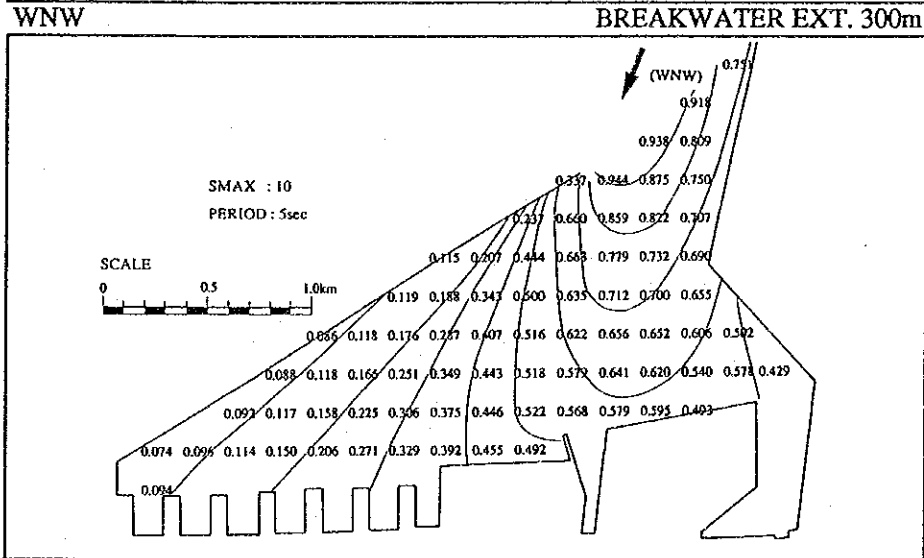
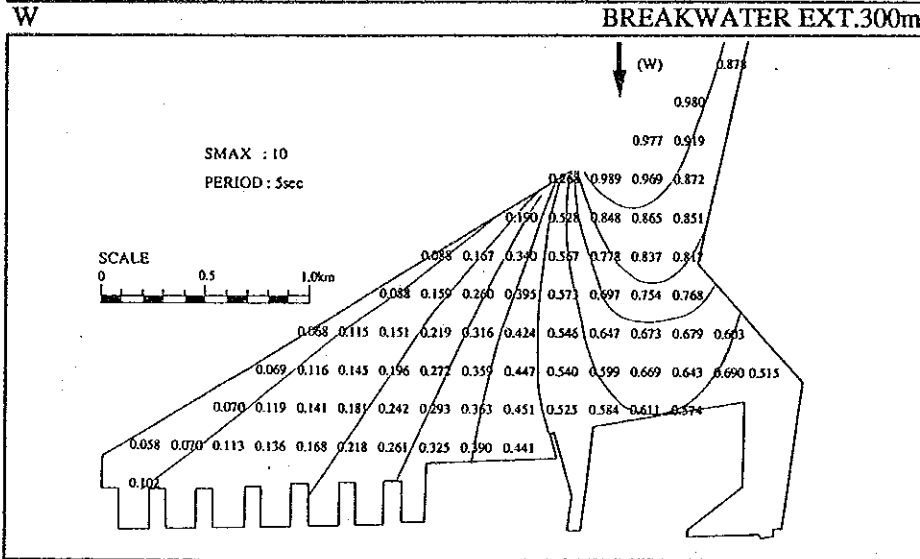
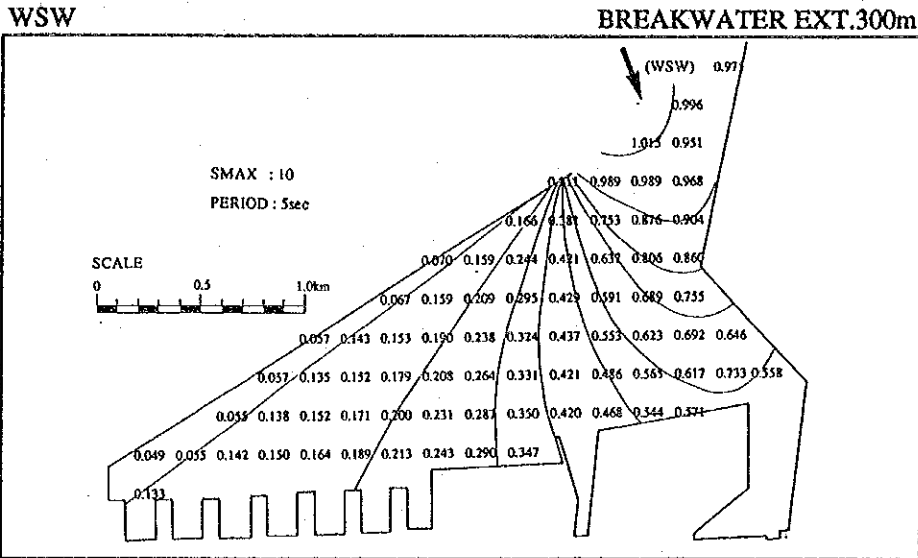
TOTAL NUMBER OF DATA POINTS = 1285

NOTES : - Matrix values are percentages of total number of good data points.
- Values include speeds greater than or equal to their column heading, but less than the following heading.

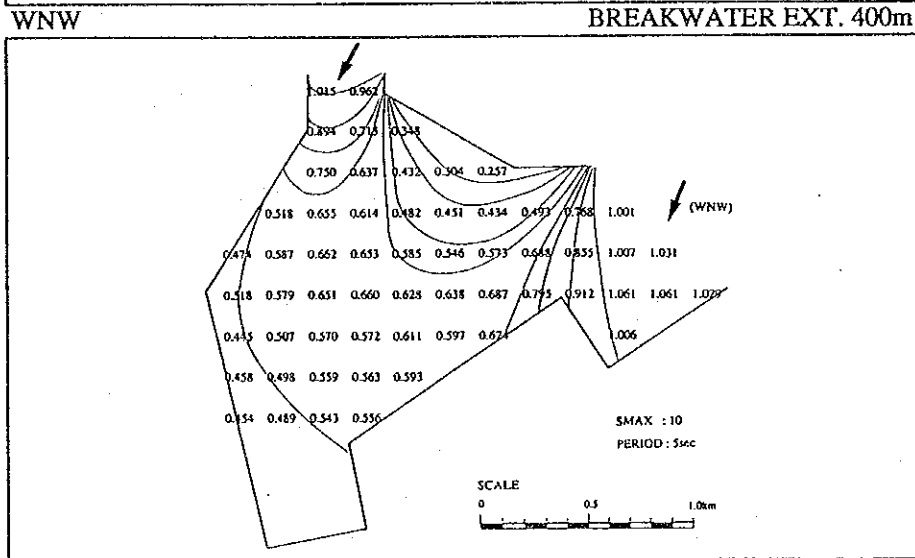
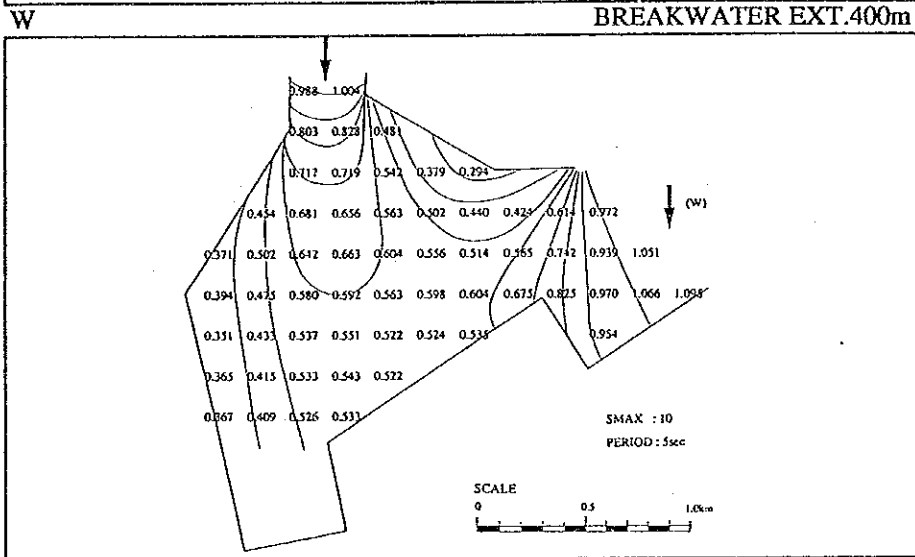
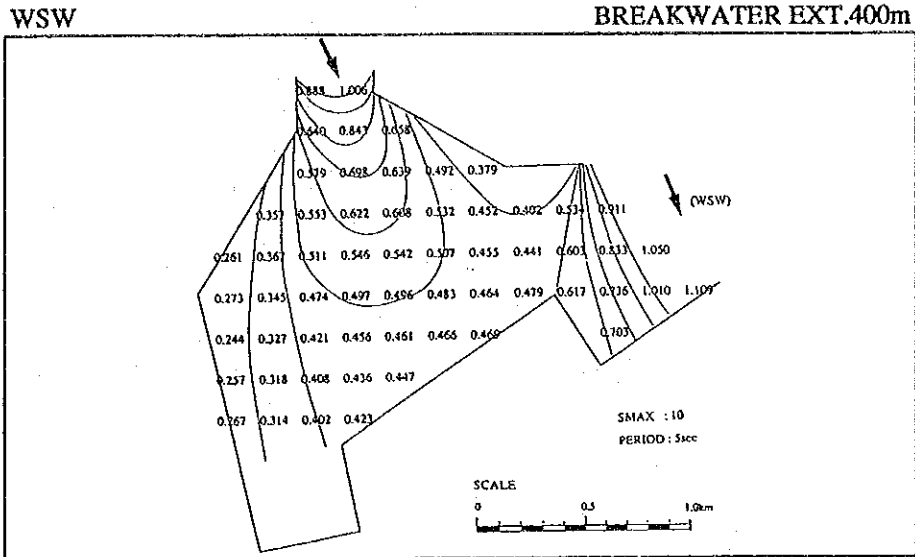
APPENDIX A-4 Fetch Length at Port of Manila, Sangley point and Naic/Cavite



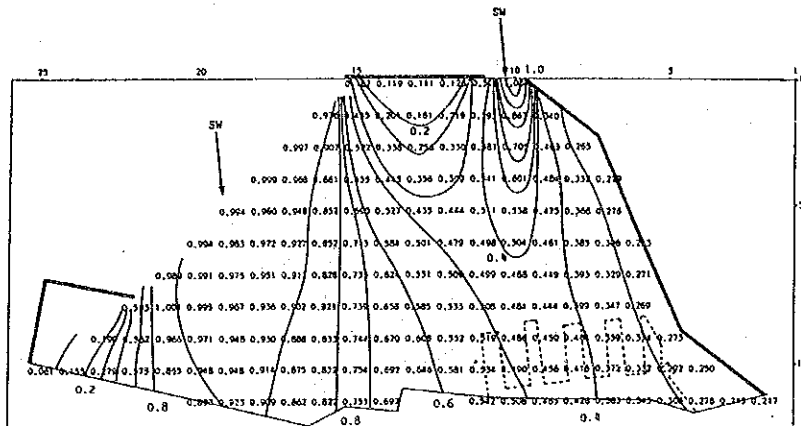
APPENDIX A-5 Diffraction Coefficient at Manila North Harbor



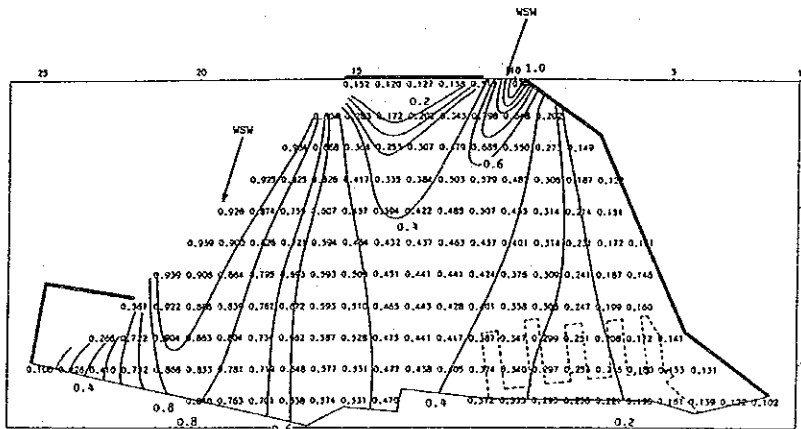
APPENDIX A-6 Diffraction Coefficient at MICT



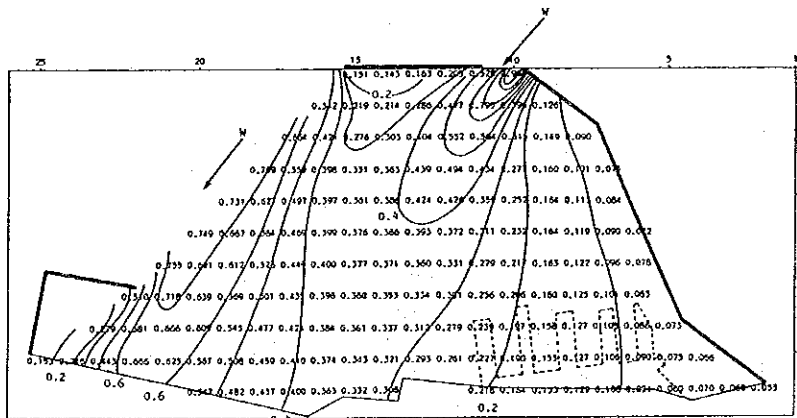
APPENDIX A-7 Diffraction Coefficient at Manila South Harbor



Diffraction Coefficient (SW direction wind) (3 of 5)



Diffraction Coefficient (NSW direction wind) (4 of 5)



Diffraction Coefficient (W direction wind) (5 of 5)

APPENDIX A-8 Diffraction Coefficient at Naic/Cavite

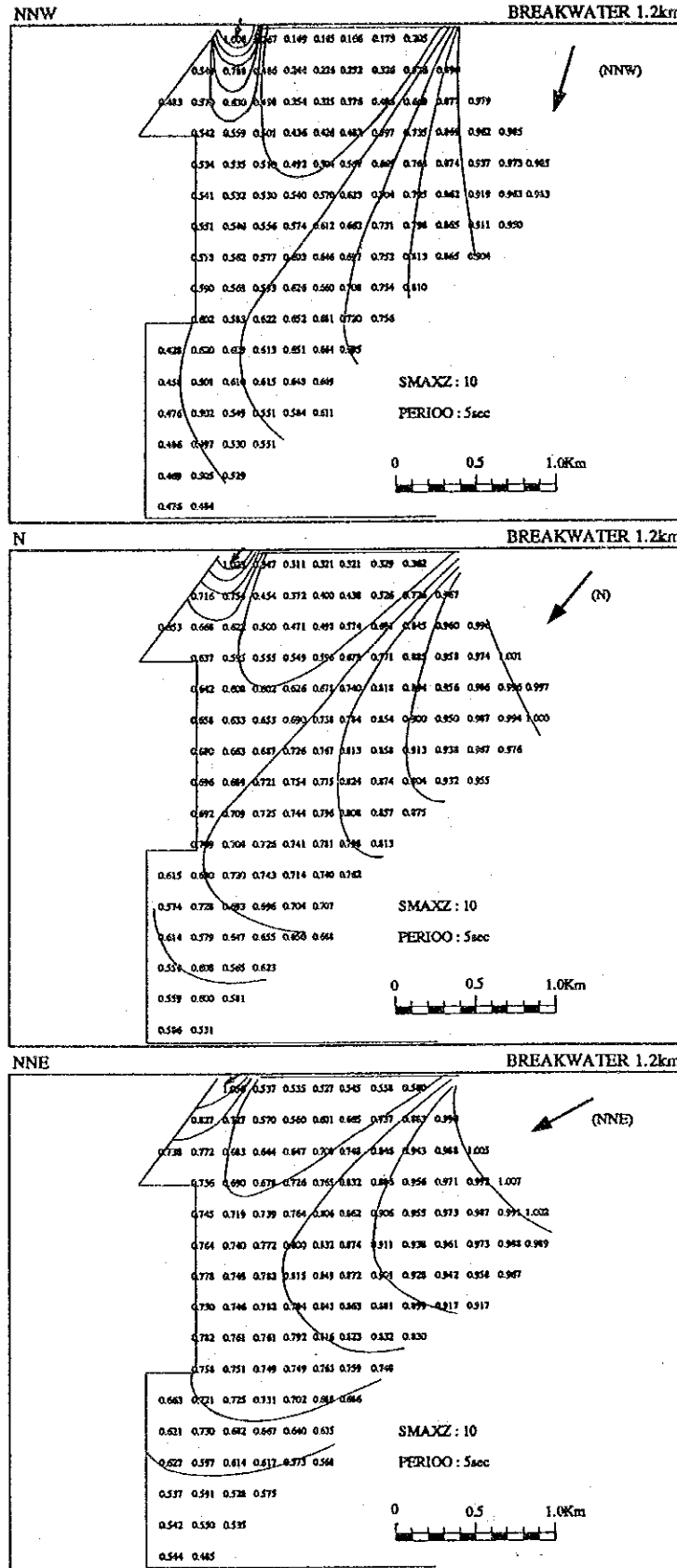


Fig. C DIFFRACTION COEFFICIENT - NAIC PORT

APPENDIX A-9 Occurrence Frequency of Wind Speed and Direction

(PORT AREA STATION IN 1986)

Wind Spd 0-5 m/s	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
6	6 (1.64)	19 (5.21)	2 (0.55)	5 (1.37)	20 (5.48)	13 (3.56)	8 (2.19)	18 (4.93)	11 (3.01)	8 (2.19)	25 (6.85)	22 (6.03)	60 (16.44)	16 (4.38)	42 (11.51)	6 (1.64)	281 (76.99)
7		1 (0.27)			1 (0.27)			1 (0.27)	1 (0.27)			5 (1.37)	2 (0.55)				10 (2.74)
8		2 (0.55)		1 (0.27)	2 (0.55)	3 (0.82)	1 (0.27)		1 (0.27)	1 (0.27)	2 (0.55)	6 (1.64)	6 (1.64)	2 (0.55)			27 (7.40)
9						2 (0.55)											2 (0.55)
10							3 (0.82)	6 (1.64)				1 (0.27)	4 (1.10)	1 (0.27)	1 (0.27)		16 (4.38)
11		1 (0.27)										1 (0.27)					2 (0.55)
12						2 (0.55)		1 (0.27)				1 (0.27)	1 (0.27)		1 (0.27)		6 (1.64)
13																	0 (0.00)
14																	0 (0.00)
15													1 (0.27)			1 (0.27)	2 (0.55)
16		1 (0.27)											1 (0.27)				2 (0.55)
17																	0 (0.00)
18			1 (0.27)										1 (0.27)				2 (0.55)
19																	0 (0.00)
20 ~						1 (0.27)											1 (0.27)
Total	6 (1.64)	24 (6.58)	3 (0.82)	6 (1.64)	23 (6.30)	21 (5.75)	12 (3.29)	28 (7.67)	13 (3.56)	9 (2.47)	27 (7.40)	37 (10.14)	85 (23.29)	20 (5.48)	44 (12.05)	7 (1.92)	365 (100.00)

Source : PAGASA

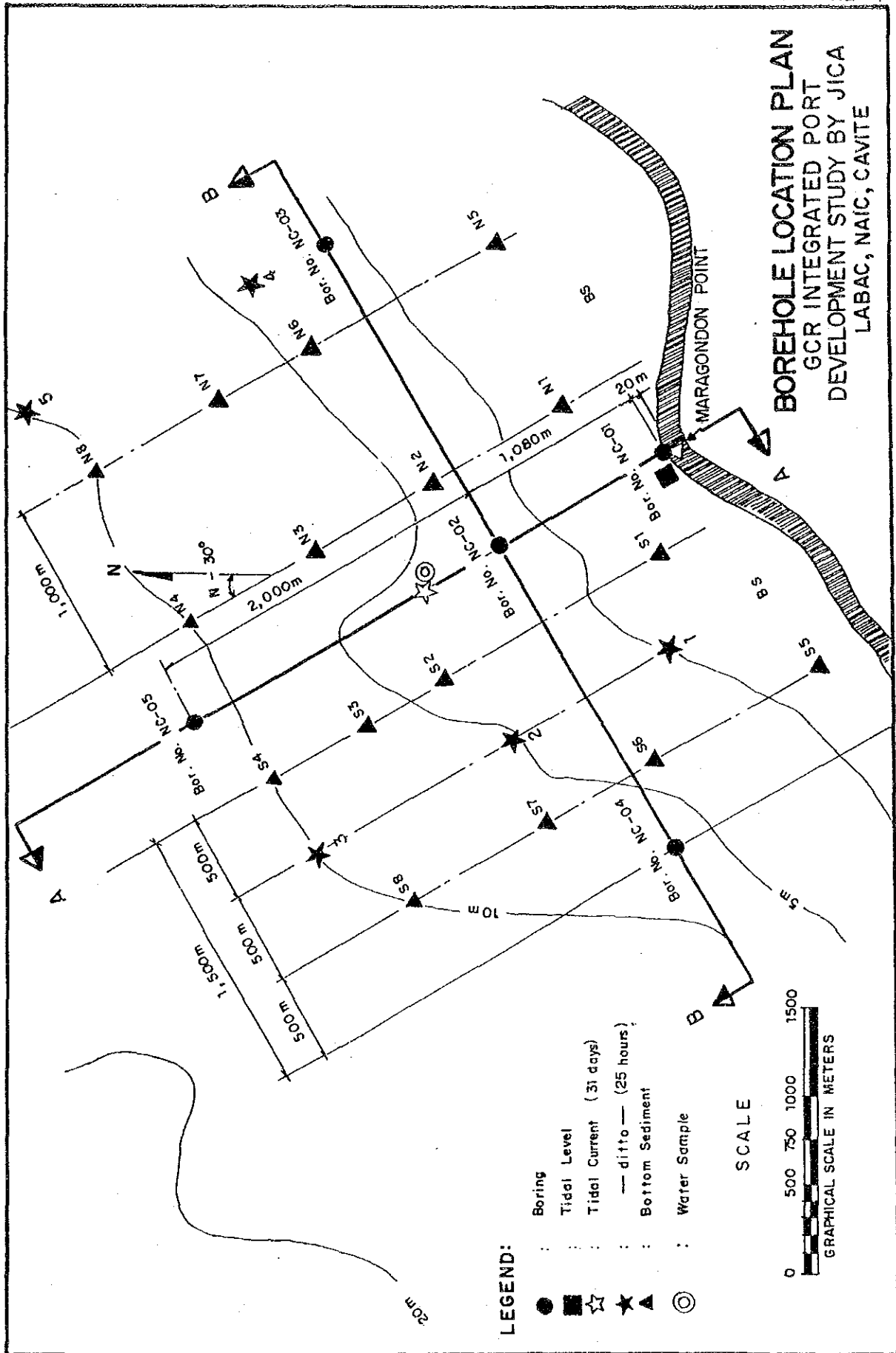
APPENDIX A-10 Accumulated Wave Occurrence

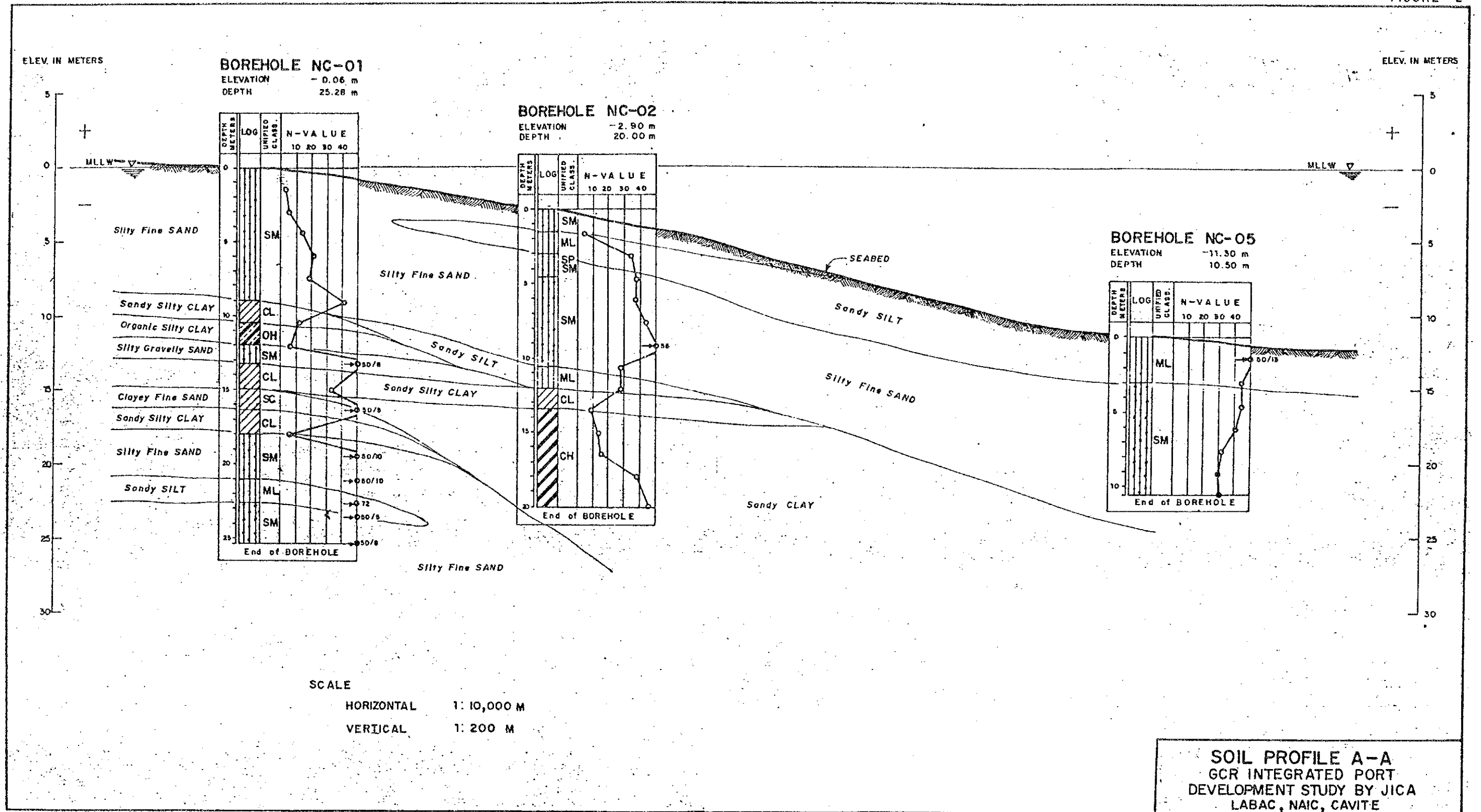
Wind Spd Observed (m/s)	Wave Height (m)									Accumulated Wave Occurrence (%)							
	at Port Entrance		at Berth of Naic/Cavite			at Berth of Manila North			at Berth of MICT			Naic/Cavite			Manila North/MICT		
	Manila	Naic	NNW	N	NNE	WSW	W	WNW	WSW	W	WNW	NNW	N	NNE	WSW	W	WNW
	(Diff.Coeff.)		(0.602)	(0.709)	(0.758)	(0.544)	(0.611)	(0.595)	(0.469)	(0.535)	(0.624)						
6	0.55	0.60	0.36	0.43	0.45	0.30	0.34	0.33	0.26	0.29	0.34	0.27	0.00	1.37	4.11	6.85	1.10
7	0.65	0.70	0.42	0.50	0.53	0.35	0.40	0.39	0.30	0.35	0.41	0.27	0.00	1.37	3.84	4.38	0.82
8	0.80	0.85	0.51	0.60	0.64	0.44	0.49	0.48	0.38	0.43	0.50	0.27	0.00	1.10	2.47	3.84	0.82
9	0.90	1.00	0.60	0.71	0.76	0.49	0.55	0.54	0.42	0.48	0.56	0.27	0.00	0.55	0.82	2.19	0.27
10	1.05	1.15	0.69	0.82	0.87	0.57	0.64	0.62	0.49	0.56	0.66	0.27	0.00	0.55	0.82	2.19	0.27
11	1.20	1.30	0.78	0.92	0.99	0.65	0.73	0.71	0.56	0.64	0.75	0.27	0.00	0.55	0.55	1.10	0.00
12	1.35	1.45	0.87	1.03	1.10	0.73	0.82	0.80	0.63	0.72	0.84	0.27	0.00	0.27	0.27	1.10	0.00
13	1.45	1.60	0.96	1.13	1.21	0.79	0.89	0.86	0.68	0.78	0.90	0.27	0.00	0.27	0.00	0.82	0.00
14	1.60	1.75	1.05	1.24	1.33	0.87	0.98	0.95	0.75	0.86	1.00	0.27	0.00	0.27	0.00	0.82	0.00
15	1.75	1.90	1.14	1.35	1.44	0.95	1.07	1.04	0.82	0.94	1.09	0.27	0.00	0.27	0.00	0.82	0.00
16	1.90	2.05	1.23	1.45	1.55	1.03	1.16	1.13	0.89	1.02	1.19	0.00	0.00	0.27	0.00	0.55	0.00
17	2.00	2.20	1.32	1.56	1.67	1.09	1.22	1.19	0.94	1.07	1.25	0.00	0.00	0.00	0.00	0.27	0.00
18	2.15	2.35	1.41	1.67	1.78	1.17	1.31	1.28	1.01	1.15	1.34	0.00	0.00	0.00	0.00	0.27	0.00
19	2.30	2.50	1.51	1.77	1.90	1.25	1.41	1.37	1.08	1.23	1.44	0.00	0.00	0.00	0.00	0.00	0.00
20	2.45	2.70	1.63	1.91	2.05	1.33	1.50	1.46	1.15	1.31	1.53	0.00	0.00	0.00	0.00	0.00	0.00

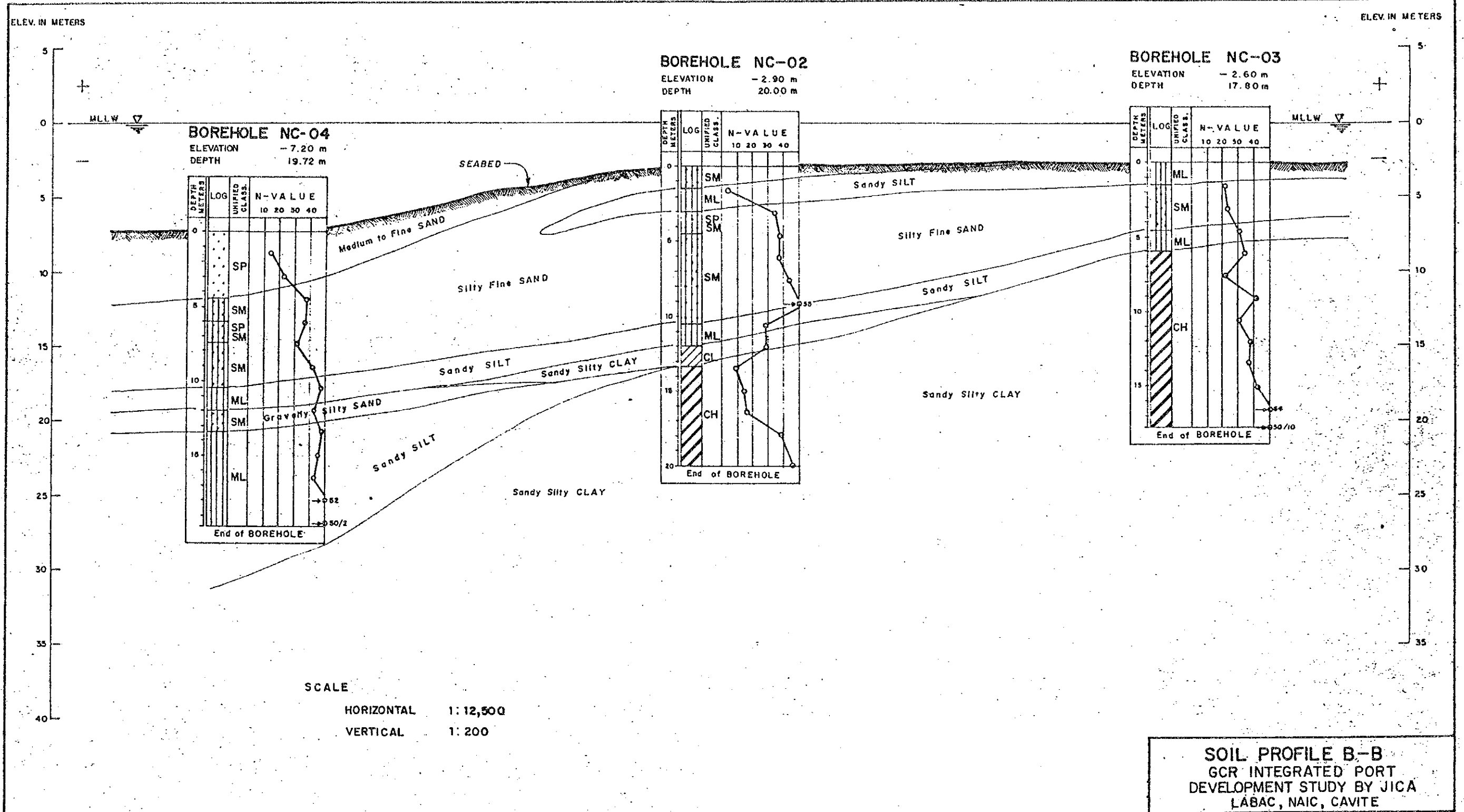
APPENDIX A-11 Berth Availability 7H AVAILABILITY

PORT	Naic/Cavite			Manila North			MICT		
WAVE DIRECTION	NNW	N	NNE	WSW	W	WNW	WSW	W	WNW
WAVE OCCURRENCE(%) (H > 0.5 m)	0.27	0.00	1.37	0.82	2.50	0.60	0.80	2.19	0.82
TOTAL (%)	1.64			3.92			3.81		
BERTH AVAILABILITY (%)	98.36			96.08			96.19		

FIGURE 1







APPENDIX A-15 Borehole Log & Test Results No.1 Naic/Cavite

SHEET 1 OF 2

A-1a

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: GCR INTEGRATED PORT DEVELOPMENT				GROUND ELEV. <u>-0.06</u> m				WATER LEV. <u>OFFSHORE</u> m															
LOCATION: <u>BGY. LABAC, NAIC, CAVITE</u>				WEATHER: <u>CLOUDY</u>				DATE GAUGED: <u>27 NOV 93</u>															
BOREHOLE NO. <u>7</u> DATE DRILLED: <u>26-27 NOV 93</u>				COORDINATES: <u>1583136.613</u> N, <u>471029.600</u> E																			
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL	CLASSIFICATION	ROD %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTENBERG LIMITS			UNCONFINED COMP. TEST			SIEVE ANALYSIS % PASSING SIEVE					
							15 cm	15 cm	15 cm			LIQUID LIMIT, %	PLASTICITY INDEX, %	SPECIFIC GRAVITY	STRENGTH Kg/cm ²	STRAIN, %	4	10	40	100			
1	SS-1	100				Silty Fine SAND ; grayish brown ; non-plastic fines ; very loose .	1	1	2	57					2.65				95	89	76	15	
2						Silty Fine SAND ; dark gray ; non-plastic fines ; very loose .									2.67				82	68	52	30	
3	SS-2	89					2	3	2	38													
4																							
5	SS-3	89		SM		Gravelly Silty SAND ; dark gray ; fine grained ; non-plastic fines ; medium dense	6	7	7														
6	SS-4	100					14	10	11	29					2.64				84	70	54	33	
7																							
8	SS-5	89				Silty Fine SAND ; dark gray ; non-plastic fines ; medium dense .	13	9	10	33					2.66				79	70	58	27	
9	SS-6	100					18	25	16	29					2.65				99	95	65	29	
10				CL		Sandy Silty CLAY ; dark gray ; low to medium plasticity ; fine sand ; stiff .	3	3	8	51					2.66				90	88	71	54	
11	SS-7	100					3	3	8	51													
12				OH		Organic Silty CLAY ; dark gray ; high plasticity ; (peaty) firm .	4	2	4	78					2.65				96	92	84	65	
13	SS-8	100					4	2	4	78													
14				SM		Silty Gravelly SAND ; dark gray ; fine grained ; hard .	31		50/8	35					2.68				85	78	62	21	
15	SS-9	87																					
16				CL		Sandy Silty CLAY ; brown ; medium plasticity ; fine sand ; hard .	10	11	21	52					2.63				99	98	95	77	
17	SS-K	100					10	11	21	52													
18				SC		Clayey Fine SAND ; brown ; medium plastic fines ; very dense .	10		50/5	25					2.64				97	87	71	46	
19	SS-11	100					10		50/5	25													
20				CL		Sandy Silty CLAY ; brown ; medium plasticity ; fine sand ; firm .	4	2	4	52					2.62				100	99	95	73	
21	SS-12	89					4	2	4	52													
22				SM		Silty Fine SAND ; dark brown ; slightly plastic fines ; very dense .	30		50/10	39					2.64				99	98	97	45	
23	SS-13	80					30		50/10	39													

MACHINE: ACKER ACE
 DRILLER: A. TABANAO
 SUPERVISOR: J.L. FAJARDO

LEGEND:
 ■ SS - SPLIT SPOON SAMPLE
 □ WS - WASH SAMPLE
 ▨ UDS - UNDISTURBED SAMPLE
 ▨ CR - CORE SAMPLE
 R W/ HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>-0.06</u> m		WATER LEV. <u>BELOW O.S. OFFSHORE</u> m														
LOCATION: <u>BGY. LABAC, NAIG, CAVITE</u>				WEATHER: <u>CLOUDY</u>		DATE GAUGED: <u>27 NOV 93</u>														
BOREHOLE NO. <u>7</u> DATE DRILLED: <u>26-27 NOV 93</u>				COORDINATES: <u>1583136.613</u> N, <u>471029.600</u> E																
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL	CLASSIFICATION	R ₀₀ %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTENBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE			
							15 cm	15 cm	15 cm			LIQUID LIMIT, %	PLASTICITY INDEX, %		STRENGTH kg/cm ²	STRAIN, %	4	10	40	200
21	SS-14	100		SM		- do -	32	50	10	56			2.63			99	99	98	31	
22	SS-15	0		ML		Sandy SILT ; dark brown ; slightly plastic ; fine sand ; very dense .	28	3	41	43			2.64			97	96	96	72	
24	SS-16	100		SM		Silty Fine SAND ; dark brown ; trace of pea gravel .	34	50	3	33			2.67			82	78	74	36	
25	SS-17	87				End of BOREHOLE (25.28)	37	50	8	36			2.65			96	92	73	17	

MACHINE: ACKER ACE
 DRILLER: A. TABANAO
 SUPERVISOR: J.L. FAJARDO

LEGEND:
 SS - SPLIT SPOON SAMPLE
 WS - WASH SAMPLE
 UD - UNDISTURBED SAMPLE
 CR - CORE SAMPLE
 H/W - HYDROMETER ANALYSIS

APPENDIX A-16 Borehole Log & Test Results No.2 Naic/Cavite

SHEET 1 OF 1

A-2

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: GCR INTEGRATED PORT DEVELOPMENT				GROUND ELEV. -2.90 in				WATER LEV. BELOW G.S. OFFSHORE in												
LOCATION: BGY. LABAG, NAIC, CAVITE				WEATHER: FAIR				DATE GAUGED: 30 NOV 93												
BOREHOLE NO. 2				DATE DRILLED: 29-30 NOV 93				COORDINATE S: 1584069.262 N, 470485.504 E												
DEPTH, m	SAMPLE NUMBER	RECOVERY %	LOG SYN BOL	CLASSIFICATION	R 00 %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTENBERG LIMITS		SPECIFIC GRAVITY	UNCOIFIED COMB TEST		SIEVE ANALYSIS % PASSING SIEVE			
							15 cm	15 cm	15 cm			LIQUID LIMIT %	PLASTICITY INDEX, %		STRENGTH kg/cm ²	STRAIN, %	4	10	40	100
1	SS-1	100		SM		Silty Fine SAND ; dark gray ; non-plastic fines ; loose .	6	2	2	29				2.66		97	91	73	45	
2	SS-2	100		ML		Sandy SILT ; dark gray ; non-plasticity ; fine sand ; dense .	12	16	19	23				2.66		98	92	76	52	
3	SS-3	100		SP SM		Silty Gravelly SAND ; dark gray ; medium grained ; dense .	10	15	23											
4	SS-4	100				Gravelly Silty SAND ; dark gray ; fine grained ; dense .	14	19	19	27				2.68		75	60	46	31	
5	SS-5	100				Silty Fine to Medium SAND ; gray to dark gray ; traces of pea gravel ; dense to very dense .	12	20	22	24				2.67		96	87	68	48	
6	SS-6	33		SM			14	33	22											
7	SS-7	33					10	13	15											
8	SS-8	33		ML		Sandy SILT ; gray ; non-plasticity ; fine sand ; medium dense .	12	14	15	24				2.65		98	92	76	53	
9	SS-9	100		CL		Sandy Silty CLAY ; gray ; medium plasticity ; fine sand ; loose .	3	3	6	81				2.64		98	96	92	63	
10	SS-10	100				Sandy Silty CLAY ; gray ; high plasticity ; fine sand ; stiff to very stiff .	4	7	7	80				2.61		89	79	78	76	
11	SS-11	100		CH			6	7	9											
12	SS-12	100				Sandy CLAY ; dark gray ; high plasticity ; fine sand ; hard .	10	15	24	91				2.63		93	89	84	73	
13	SS-13	100				End of BOREHOLE	14	20	26											

MACHINE: ACKER ACE
 DRILLER: A. TABANAO
 SUPERVISOR: J. L. FAJARDO

LEGEND:
 ■ SS - SPLIT SPOON SAMPLE
 □ WS - WASH SAMPLE
 ▨ UDS - UNDISTURBED SAMPLE
 ▨ CR - CORE SAMPLE
 * W/ HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>-2.60</u> m		WATER LEV. <u>OFFSHORE</u> m														
LOCATION: <u>BGY. LABAC, NAIC, CAVITE</u>				WEATHER: <u>CLOUDY</u>		DATE GAUGED: <u>2 DEC 93</u>														
BOREHOLE NO. <u>3</u> DATE DRILLED: <u>2 DEC 93</u>				COORDINATES: <u>1585069.262</u> N, <u>472217.555</u> E																
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL	CLASSIFICATION	R ₉₀ %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTENBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE			
							15 cm	15 cm	15 cm			LIQUID LIMIT %	PLASTICITY INDEX, %		STRENGTH Kg/cm ²	STRAIN, %	4	10	40	100
1	SS-1	89		ML		Sandy SILT ; dark gray ; non - plasticity ; fine sand ; medium dense .	7	7	15	33			2.60			95	87	72	52	
2																				
3	SS-2	89		SM		Silty Medium SAND ; dark gray ; non - plastic fines ; medium dense to dense .	9	12	12	28			2.61			92	79	47	24	
4																				
5	SS-3	100					11	17	14	30			2.62			95	88	76	49	
6																				
7	SS-4	89		ML		Sandy SILT ; dark brown ; non - plasticity ; medium sand ; dense .	10	14	21	32			2.62			92	83	68	57	
8																				
9	SS-5	100					7	10	12	36			2.61			100	98	96	92	
10																				
11	SS-6	89				Silty CLAY ; brown ; high plasticity ; stiff to very stiff .	14	21	21	36			2.63			100	98	96		
12																				
13	SS-7	78					13	15	16	45			2.62			100	99	94	90	
14																				
15	SS-8	89		CH			12	17	21	49			2.61			100	99	94	91	
16																				
17	SS-9	100					14	19	18	39			2.64			98	94	91	84	
18																				
19	SS-10	89				Silty CLAY ; brown to dark brown ; high plasticity ; very stiff to hard .	16	20	23	38			2.62			100	98	93		
20																				
21	SS-11	78					22	30	34	44			2.63			99	96	92	86	
22																				
23	SS-12	80					31	30	10	34			2.61			100	99	94		
24						End of BOREHOLE														

MACHINE: ACKER ACE
 DRILLER: A. TABANAO
 SUPERVISOR: J. L. FAJARDO

LEGEND:
 ■ SS - SPLIT SPOON SAMPLE
 ▨ WS - WASH SAMPLE
 ▨ UDS - UNDISTURBED SAMPLE
 ▨ CR - CORE SAMPLE
 * W/ HYDROMETER ANALYSIS

APPENDIX A-18 Borehole Log & Test Results No.4 Naic/Cavite

SHEET 1 OF 1

A - 4

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>-7.20</u> m		WATER LEV. <u>OFFSHORE</u> m															
LOCATION: <u>BRGY. LABAC, NAIC, CAVITE</u>				WEATHER: <u>CLOUDY</u>		DATE GAUGED: <u>15 DEC 93</u>															
BOREHOLE NO. <u>4</u> DATE DRILLED: <u>14-15 DEC 93</u>				COORDINATES: <u>1583069.262</u> N, <u>468753.504</u> E																	
DEPTH, m	SAMPLE NUMBER	RECOVERY %	LOG SYMBOL	CLASSIFICATION	R ₆₀ %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTERBERG LIMITS		SPECIFIC GRAVITY	UNCONDITIONED COMR TEST		SIEVE ANALYSIS % PASSING SIEVE				
							15 cm	15 cm	15 cm			LIQUID LIMIT %	PLASTICITY INDEX, %		STRENGTH Kg/cm ²	STRAIN, %	4	10	40	800	
1	SS-1	89				Medium to Fine SAND ; dark gray ; presence of shell fragments ; medium dense to dense .	5	7	7	37							100	99	55	3	
2				SP																	
3	SS-2	100						8	10	13	30							99	90	48	3
4																					
5	SS-3	89				Silty Fine SAND ; gray ; non-plastic fines ; traces of shell and coral fragments ; dense .	10	16	22	30							98	89	49	4	
6				SM																	
7	SS-4	89				Silty SAND ; gray ; predominantly coarse grained ; traces of shell and coral fragments ; dense .	12	18	18	37							95	87	69	20	
8				SP																	
9	SS-5	78				Silty SAND ; gray to dark gray ; medium to fine grained ; non-plastic fines ; dense .	13	15	16	27							95	68	39	11	
10				SM																	
11	SS-6	89				Silty SAND ; gray to dark gray ; medium to fine grained ; non-plastic fines ; dense .	16	20	21	36							93	85	63	14	
12				SM																	
13	SS-7	89				Sandy SILT ; dark gray ; non-plasticity ; fine sand ; dense .	14	23	25	25							98	92	68	35	
14				ML																	
15	SS-8	100				Gravelly, Silty SAND ; dark gray ; predominantly coarse and fine grained ; sub-angular gravel ; dense .	20	20	23	24							100	97	84	56	
16				SM																	
17	SS-9	89				Sandy SILT ; dark brownish gray ; non-plasticity ; fine sand ; dense to very dense .	17	22	26	36							80	60	49	28	
18				ML																	
19	SS-10	89				Sandy SILT ; dark brownish gray ; non-plasticity ; fine sand ; dense to very dense .	18	21	24	29							100	98	84	54	
20				ML																	
21	SS-11	89				Sandy SILT ; dark brownish gray ; non-plasticity ; fine sand ; dense to very dense .	19	20	23	25							99	96	82	55	
22				ML																	
23	SS-12	89				Sandy SILT ; dark brownish gray ; non-plasticity ; fine sand ; dense to very dense .	19	24	28	23							100	98	88	59	
24				ML																	
25	SS-13	88				End of BOREHOLE	48	50	2	26							99	97	87	59	

MACHINE: ACKER ACE
 DRILLER: A. TABANAO
 SUPERVISOR: J.L. FAJARDO

LEGEND:
 ■ SS - SPLIT SPOON SAMPLE
 □ WS - WASH SAMPLE
 ▨ UD - UNDISTURBED SAMPLE
 ▩ CR - CORE SAMPLE
 * W/ HYDROMETER ANALYSIS

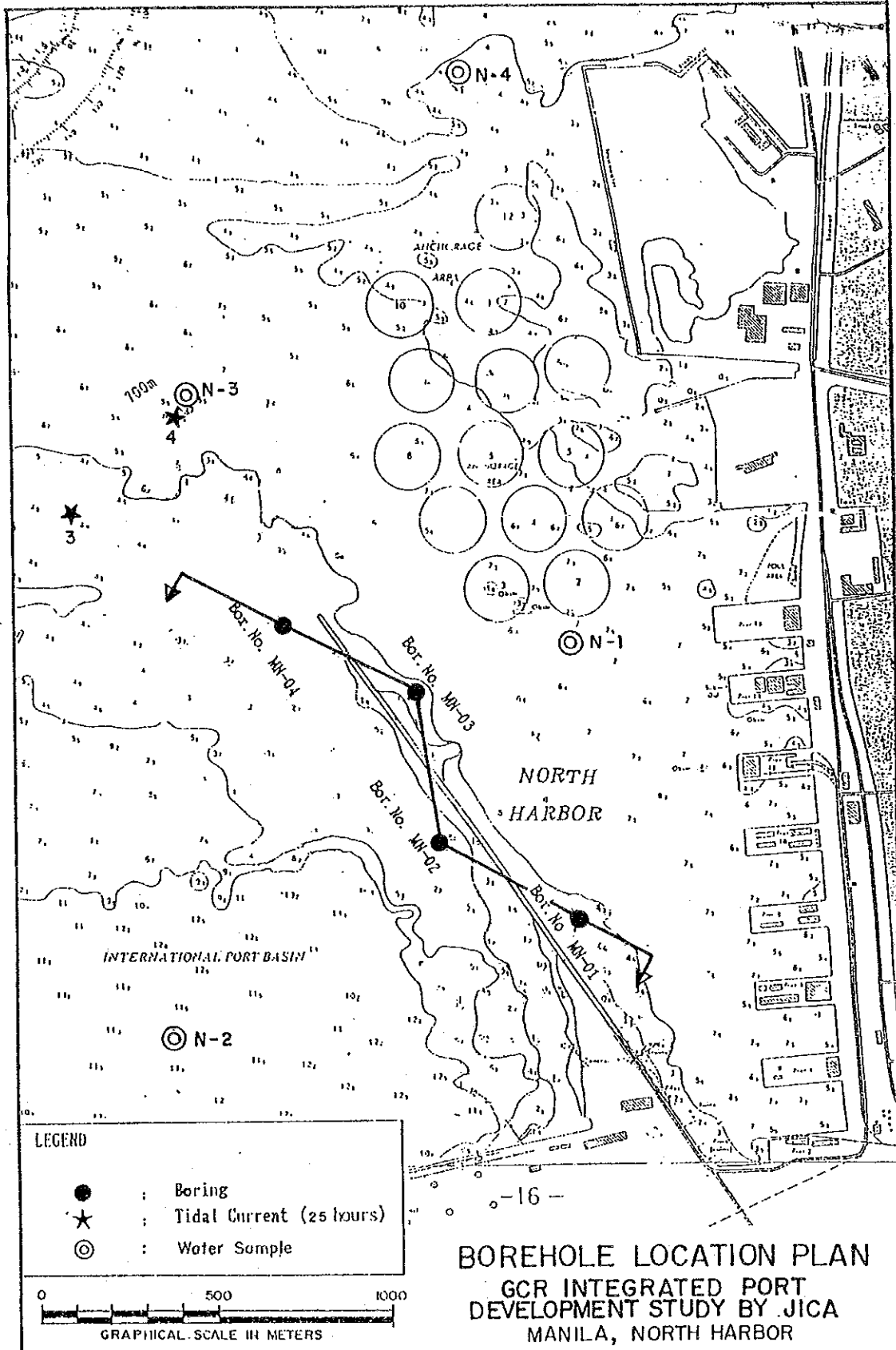
FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

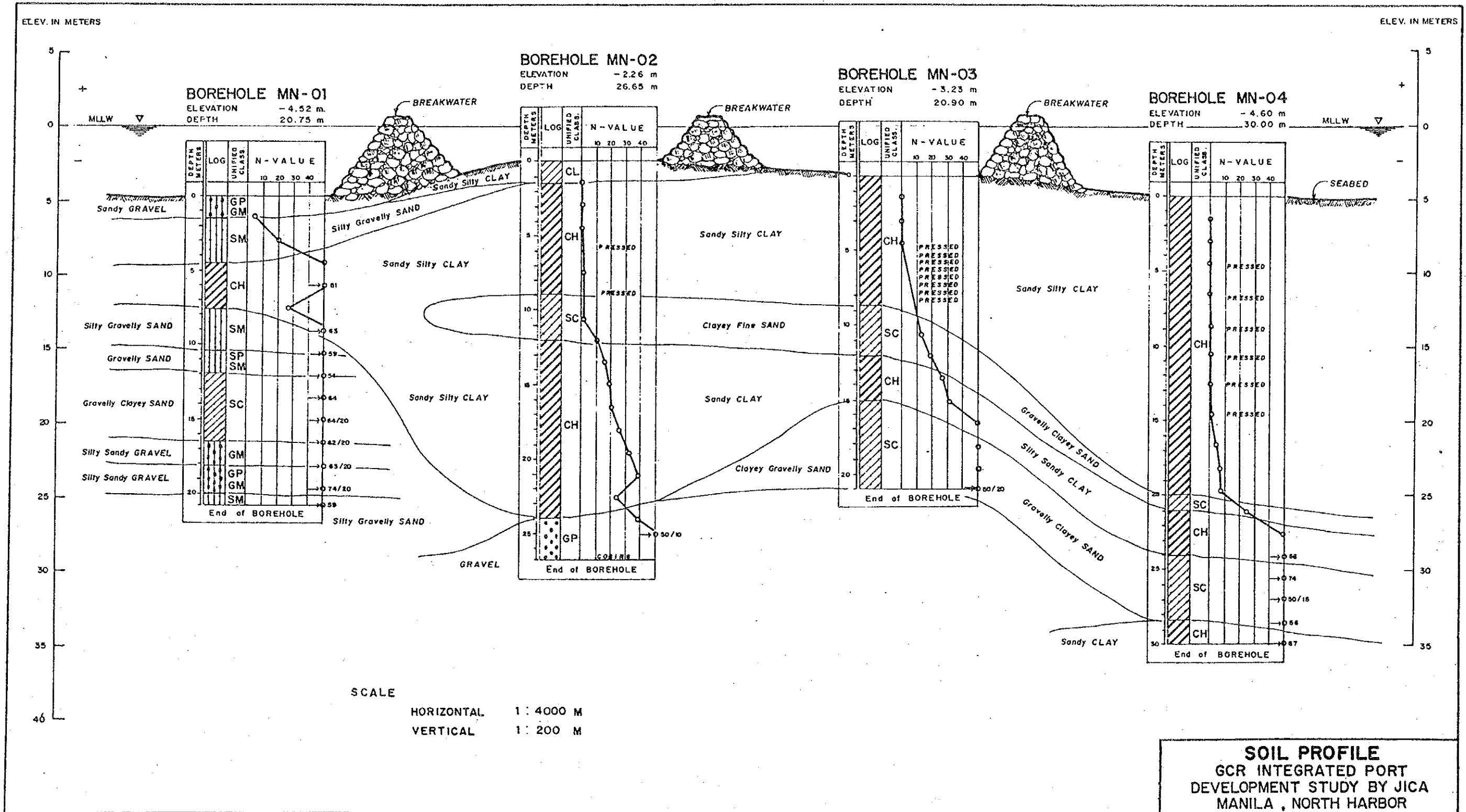
PROJECT: GCR INTEGRATED PORT DEVELOPMENT				GROUND ELEV. <u>11.30</u> m		WATER LEV. BELOW O.S. <u>OFFSHORE</u>														
LOCATION: <u>BGY. LABAC, NAIC, CAVITE</u>				WEATHER: <u>CLOUDY</u>		DATE GAUGED: <u>4 DEC 93</u>														
BOREHOLE NO. <u>5</u> DATE DRILLED: <u>4 DEC 93</u>				COORDINATES: <u>1585801.313</u> N, <u>471035.504</u> E																
DEPTH, m	SAMPLE NUMBER	RECOVERY %	LOG SYMBOL	CLASSIFICATION	ROD #	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTENBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE			
							15 cm	30 cm	45 cm			LIQUID LIMIT %	PLASTICITY INDEX, %		STRENGTH Kgf/cm ²	STRAIN, %	4	10	40	100
1	SS-1	84		ML		Sandy SILT ; gray; non-plastic fines ; fine grained sand ; very dense .	20	50	19	28				2.63			100	98	87	58
2																				
3	SS-2	89					20	18	27	22				2.62			99	95	77	51
4																				
5	SS-3	100					16	19	26	34				2.61			93	85	68	44
6	SS-4	89		SM		Silly Fine SAND ; dark gray ; non-plastic fines ; with traces of sub-angular gravel ; dense .	14	20	21	30				2.62			94	86	68	44
7																				
8	SS-5	78					17	18	14	31				2.63			97	89	72	47
9																				
10	SS-6	89					13	15	15	33				2.61			94	86	69	45
	SS-7	89					12	14	17	30				2.61			93	86	70	46
						End of BOREHOLE														

MACHINE: ACKER ACE
 DRILLER: A. TABANAO
 SUPERVISOR: J.L. FAJARDO

LEGEND:
 SS - SPLIT SPOON SAMPLE
 WS - WASH SAMPLE
 UDS - UNDISTURBED SAMPLE
 CR - CORE SAMPLE
 H W / HYDROMETER ANALYSIS

FIGURE 1





FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>-4.52</u> in		WATER LEV. <u>OFFSHORE</u> m														
LOCATION: <u>NORTH HARBOR, MANILA</u>				WEATHER: <u>FAIR</u>		DATE GAUGED: <u>6 JAN 94</u>														
BOREHOLE NO. <u>BH-MN-1</u> DATE DRILLED: <u>4-6 JAN 94</u>				COORDINATES: <u>1615335.258</u> N, <u>495018.316</u> E																
DEPTH, m	SAMPLE NUMBER	RECOVERY %	LOG SYMBOL	CLASSIFICATION	ROD %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTERBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIZE ANALYSIS % PASSING SIEVE			
							15 cm	15 cm	15 cm			LIQUID LIMIT, %	PLASTICITY INDEX, %		STRENGTH, kg/cm ²	STRAIN, %	4	10	40	100
1	SS-1	56		GP GM		Sandy GRAVEL ; dark gray ; sub-angular ; medium sand ; with shell fragments ; loose .	1	2	3	27				2.65			46	32	16	10
2	SS-2	67		SM		Silty Gravelly SAND ; grayish brown to brown ; medium grained ; sub- angular gravel ; slightly plastic fines ; dense .	16	10	10											
3	SS-3	56		SM			18	25	25	18				2.63			76	63	33	20
4	SS-4	56		CH		Gravelly Sandy CLAY ; brown ; medium to high plasticity ; sub- angular gravel ; hard .	17	26	25											
5	SS-5	100		CH		Sandy Silty CLAY ; brown ; medium to high plasticity ; fine sand ; very stiff .	13	17	10											
6	SS-6	78		SM		Silty Gravelly SAND ; brown medium grained ; sub- angular gravel ; slight to non- plastic fines ; very dense .	15	28	35	75				2.65			73	63	26	12
7	SS-7	44		SM			13	25	34											
8	SS-8	44		SP SM		Gravelly SAND ; grayish brown ; medium to coarse grained ; very dense .	18	24	30	98				2.64			72	23	3	2
9	SS-9	44		SC		Gravelly Clayey SAND ; brown ; medium grained ; sub- angular gravel ; medium plastic fines ; very dense .	16	36	28											
10	SS-10	57		SC			14	29	35	5										
11	SS-11	57		GM		Silty Sandy GRAVEL ; brown ; sub- angular ; coarse sand ; slightly plastic fines ; very dense .	19	28	34	10				2.64			73	58	39	26
12	SS-12	57		GM			15	25	38	5										
13	SS-13	57		GP GM		Silty Sandy GRAVEL ; brown ; sub- angular ; coarse sand ; non- plastic fines ; very dense .	29	36	38	7				2.65			37	21	11	7

MACHINE: ACKER ACE
 DRILLER: J. MADERA / A. ADVINCULA
 SUPERVISOR: D. LIGBOS

LEGEND:
 ■ SS - SPLIT SPOON SAMPLE
 □ WS - WASH SAMPLE
 || UDS - UNDISTURBED SAMPLE
 ▨ CR - CORE SAMPLE
 * W/ HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>-4.52</u> m				WATER LEV. <u>OFFSHORE</u> m													
LOCATION: <u>NORTH HARBOR, MANILA</u>				WEATHER: <u>FAIR</u>				DATE GAUGED: <u>6 JAN 94</u>													
BOREHOLE NO. <u>BH-MN-1</u> DATE DRILLED: <u>4-6 JAN 93</u>				COORDINATES: <u>1615335.258</u> N, <u>495018.316</u> E																	
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL	CLASSIFICATION	R.O. %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTENBERG LIMITS		SPECIFIC GRAVITY	UNCONSOLIDATED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE				
							15 cm	15 cm	15 cm			LIQUID LIMIT, %	PLASTICITY INDEX, %		STRENGTH kg/cm ²	STRAIN, %	4	10	40	100	
21	55-14	57		SM		Silly Gravelly SAND; brown, medium grained; very dense.	26	30	5												
						End of BORE HOLE															
							MACHINE: <u>ACKER ACE</u> DRILLER: <u>J. MADERA / A. ADVINCULA</u> SUPERVISOR: <u>D. LIGBOS</u>							LEGEND: SS - SPLIT SPOON SAMPLE WS - WASH SAMPLE UDS - UNDISTURBED SAMPLE CR - CORE SAMPLE H W/ HYDRONETER ANALYSIS							

APPENDIX A-23 Borehole Log & Test Results No.MN-2 North Harbor

SHEET 1 OF 2

A-20

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>2.26</u> m		WATER LEV. <u>OFFSHORE</u> m														
LOCATION: <u>NORTH HARBOR, MANILA</u>				WEATHER: <u>CLOUDY</u>		DATE GAUGED: <u>28 DEC 93</u>														
BOREHOLE NO. <u>BH-MN-2</u> DATE DRILLED: <u>23-28 DEC 93</u>				COORDINATES: <u>1,615,594.32</u> N, <u>494,472.10</u> E																
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL	CLASSIFICATION	REG %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. COMPEN. %	TOTAL UNIT WEIGHT, γ_{tot}	ATTENBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE			
							15 cm	15 cm	15 cm			LIQUID LIMIT %	PLASTICITY INDEX, %		STRENGTH Kg/cm ²	STRAIN, %	4	10	40	100
1	SS-1	78		CL		Sandy Silty CLAY; dark gray; medium plasticity; fine sand; very soft.	1	0	0	50		2.62					100	99	92	
2	SS-2	89				Silty CLAY; dark gray; medium to high plasticity; very soft.	1	0	0											
3	SS-3	89					1	0	0			2.61								
4	SS-3	89					1	0	0			2.61								
5	SS-3	89		CH																
6	UDS-1	90				Silty CLAY; dark gray; high plasticity; with traces of shell fragments; very soft.	PRESSED	94	1.47	82	58	2.61	0.13	14.86	99	98	98	96	*	
7	SS-4	56					1	0	1											
8	SS-4	56					1	0	1											
9	UDS-2	90				Sandy Silty CLAY; dark gray; high plasticity; with shell fragments; very soft.	PRESSED	71	1.52	61	35	2.60	0.14	16.57	98	96	83	78	*	
10	SS-5	56		SC		Clayey SAND; dark gray; fine grained; medium to high plastic fines; with abundant shell fragments; very soft to stiff.	1	0	1											
11	SS-5	56					1	0	1											
12	SS-6	89					3	4	6	53		2.61			94	85	71	44		
13	SS-7	89				Sandy CLAY; grayish brown; medium to high plasticity; fine sand; stiff to very stiff.	5	7	8			2.61								
14	SS-7	89					5	7	8			2.61								
15	SS-8	89					9	7	11	29		2.61			85	81	77	74		
16	SS-8	89		CH			9	7	11	29		2.61			85	81	77	74		
17	SS-9	89					9	10	10											
18	SS-10	89				Silty CLAY; grayish brown; medium to high plasticity; very stiff to hard.	9	12	13	37		2.61					100	98		
19	SS-10	89					9	12	13	37		2.61					100	98		
20	SS-11	89					13	15	17											

MACHINE: ACKER ACE
 DRILLER: A. TENERIFE
 SUPERVISOR: D. LIGBOS

LEGEND:
 ■ SS - SPLIT SPOON SAMPLE
 □ WS - WASH SAMPLE
 ▨ UDS - UNDISTURBED SAMPLE
 ▩ CH - CORE SAMPLE
 * N/W - HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>2.26</u> in				WATER LEV. <u>OFFSHORE</u> m BELOW O.S.													
LOCATION: <u>NORTH HARBOR, MANILA</u>				WEATHER: <u>CLOUDY</u>				DATE GAUGED: <u>28 DEC 93</u>													
BOREHOLE NO. <u>BH-MN-2</u> DATE DRILLED: <u>23-28 DEC 93</u>				COORDINATES: <u>1,615,594.32</u> N, <u>494,472.10</u> E																	
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL	CLASSIFICATION	ROD %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTENBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE				
							15 cm	15 cm	10 cm			LIQUID LIMIT, %	PLASTICITY INDEX, %		STRENGTH kg/cm ²	STRAIN %	4	10	40	200	
21	SS-12	89		CH		Silty CLAY; grayish brown; medium to high plasticity; very stiff to hard.	16	19	20												
22	SS-13	89		CH			8	11	13	24			263				100	99	99		
23																					
24	SS-14	89		CH			14	17	21	41			262				100	97			
25	SS-15	0		GP		GRAVEL; gray; sub-angular to sub-rounded.	50		10												
26	CR-1	17		GP		End of BOREHOLE															

MACHINE: ACKER ACE
 DRILLER: A. TENERIFE
 SUPERVISOR: D. LIGBOS

LEGEND:
 SS - SPLIT SPOON SAMPLE
 WS - WASH SAMPLE
 UDS - UNDISTURBED SAMPLE
 CH - CORE SAMPLE
 W/ - W/ HYDROMETER ANALYSIS

APPENDIX A-24 Borehole Log & Test Results No.MN-3 North Harbor

SHEET 1 OF 2

A-30

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>-3.23</u> m		WATER LEV. <u>OFFSHORE</u> BELOW G.S.														
LOCATION: <u>NORTH HARBOR, MANILA</u>				WEATHER: <u>FAIR</u>		DATE GAUGED: <u>4 JAN 94</u>														
BOREHOLE NO. <u>BH-MN-3</u> DATE DRILLED: <u>4 JAN 94</u>				COORDINATES: <u>161639.370</u> N, <u>494281.031</u> E																
DEPTH, m	SAMPLE NUMBER	RECOVERY % SPLT SAMPLE	LOG SYMBOL	CLASSIFICATION	R.O.C. %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTERBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE			
							15 cm	15 cm	15 cm			LIQUID LIMIT, %	PLASTICITY INDEX, %		STRENGTH K _g /cm ²	STRAIN, %	4	10	40	200
1	SS-1	89					1	0	0	80				2.61			99	98	98	97
2																				
3	SS-2	89				Silty CLAY ; dark gray ; medium to high plasticity ; with traces of minute shell fragments ; very soft to soft.	1	0	0											
4				CH																
5	SS-3	88					1	0	0											
5	UDS-1	100					PRESSED			78		66	38	2.60			100	99	97	93
5	UDS-2	100					PRESSED			82		61	39	2.60			100	99	97	92
6	UDS-3	100					PRESSED			73		65	38	2.60			96	95	92	87
6	UDS-4	100					PRESSED			79		72	45	2.61			100	99	98	
7	UDS-5	100					PRESSED			80		68	39	2.60			100	99	97	93
7	UDS-6	100					PRESSED			85		70	42	2.61			100	99	98	
8	UDS-7	100					PRESSED			79		66	36	2.60			99	98	95	93
8	UDS-8	100					PRESSED			77		65	37	2.60			99	99	98	92
9																				
10						Clayey Fine SAND ; dark gray ; medium plastic fines ; with traces of shell fragments ; medium dense .														
10	SS-4	89		SC			6	6	7											
11																				
12	SS-5	89					7	9	10	37				2.63			98	93	86	45
13																				
13	SS-6	89		CH		Sandy CLAY ; brown ; medium to high plasticity ; fine sand ; very stiff .	8	11	16	33				2.63			100	96	82	
14																				
15	SS-7	100					10	13	18	30				2.63			100	95	74	
16						Gravelly Clayey SAND ; dark brown ; fine grained ; medium plastic fines ; dense .														
16	SS-8	67					11	20	26											
17																				
17	SS-9	67		SC		Clayey Gravelly SAND ; dark brown ; coarse to medium grained ; low to medium plastic fines ; very dense .	25	50		13				2.62			58	42	25	15
18																				
19	SS-10	67					27	50												
20																				

MACHINE: ACKER ACE
 DRILLER: A. TENERIFE
 SUPERVISOR: D. LIGBOS

LEGEND:
 ■ SS - SPLT SPOON SAMPLE
 □ WS - WASH SAMPLE
 ▨ UDS - UNOBTURBED SAMPLE
 ▩ CR - CORE SAMPLE
 * W/ HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>-3.23</u> m				WATER LEV. <u>OFFSHORE</u> m											
LOCATION: <u>NORTH HARBOR, MANILA</u>				WEATHER: <u>FAIR</u>				DATE GAUGED: <u>4 JAN 94</u>											
BOREHOLE NO. <u>BH-MN-3</u> DATE DRILLED: <u>4 JAN 94</u>				COORDINATES: <u>161639.370</u> N, <u>494281.031</u> E															
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL CLASSIFICATION	R 90 %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTERBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE			
						15 cm	15 cm	15 cm			LIQUID LIMIT %	PLASTICITY INDEX, %		STRENGTH kg/cm ²	STRAIN, %	4	10	40	100
21	SS-II 67		SC		— d o — End of BOREHOLE	30	50	20	12				2.65			70	55	31	19
MACHINE: <u>ACKER ACE</u>						DRILLER: <u>A. TENERIFE</u>						SUPERVISOR: <u>D. LIGBOS</u>							
LEGEND:						<input checked="" type="checkbox"/> SS - SPLIT SPOON SAMPLE <input checked="" type="checkbox"/> WS - WASH SAMPLE <input type="checkbox"/> UDS - UNDISTURBED SAMPLE <input type="checkbox"/> CH - CORE SAMPLE <input type="checkbox"/> W/ - HYDROMETER ANALYSIS													

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>- 4.60</u> m		WATER LEV. <u>OFFSHORE</u> m														
LOCATION: <u>NORTH HARBOR, MANILA</u>				WEATHER: <u>FAIR</u>		DATE GAUGED: <u>22 DEC 93</u>														
BOREHOLE NO. <u>BH-MN-4</u> DATE DRILLED: <u>19-22 DEC 93</u>				COORDINATES: <u>1,616,365.510 N, 493,927.640 E</u>																
DEPTH, P	SAMPLE NUMBER	RECOVERY %	LOG SYMBOL	CLASSIFICATION	ROD %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTENBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE			
							15 cm	15 cm	15 cm			LIQUID LIMIT, %	PLASTICITY INDEX, %		STRENGTH Kg/cm ²	STRAIN, %	4	10	40	600
1	SS-1	100					1	0	0	125				2.61			96	90	85	84
2																				
3	SS-2	100				Silty CLAY ; gray to dark gray ; high plasticity ; presence of shell fragments ; very soft .	1	0	0					2.63						
4	SS-3	100					1	0	0											
5	UDS-1	80					PRESSED	89	1.39	83	60	2.61	0.19	16.57	98	96	93	91*		
6	SS-4	100					1	0	0											
7	UDS-2	80					PRESSED	94	1.36	89	67	2.61	0.09	12.00	100	99	99	98*		
8	SS-5	100				Sandy CLAY ; dark gray, high plasticity ; with shell fragments ; very soft .	1	1	0											
9	UDS-3	90					PRESSED	68	1.70	67	42	2.61	0.17	10.86	95	87	79	68*		
10	SS-6	89			CH		1	1	0											
11	UDS-4	100					PRESSED	97	1.42	85	63	2.62	0.13	16.57	97	96	95	95*		
12	SS-7	89				Silty CLAY ; dark gray ; high plasticity ; with shell fragments ; very soft to soft .	1	1	0											
13	UDS-5	100					PRESSED	96	1.33	88	67	2.61	0.07	12.00	100	99	99	98*		
14	SS-8	89					1	1	1											
15	UDS-6	100					PRESSED	93	1.47	86	63	2.62	0.11	11.43			100	99		
16																				
17	SS-9	100				Sandy CLAY ; dark gray ; high plasticity ; with shell fragments ; firm .	2	3	2											
18	SS-10	100					3	3	3	75				2.62			99	98	97	89
19																				
20	SS-11	89					3	3	4											

MACHINE: ACKER ACE
 DRILLER: H. TABANAO
 SUPERVISOR: D. LIGBOS

LEGEND:
 ■ 89 - SPLIT SPOON SAMPLE
 □ WS - WASH SAMPLE
 □ UD - UNDISTURBED SAMPLE
 □ CH - CORE SAMPLE
 * W/ HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>			GROUND ELEV. <u>-4.60</u> m		WATER LEV. <u>OFFSHORE</u> m															
LOCATION: <u>NORTH HARBOR, MANILA</u>			WEATHER: <u>FAIR</u>		DATE GAUGED: <u>22 DEC 93</u>															
BOREHOLE NO. <u>BH-MN-4</u> DATE DRILLED: <u>19-22 DEC 93</u>			COORDINATES: <u>1,616,365.570</u> N, <u>493,927.640</u> E																	
DEPTH, m	SAMPLE NUMBER	RECOVERY % SPLIT SAMPLE	LOG SYMBOL	CLASSIFICATION	ROD %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTENBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE			
							15 cm	15 cm	15 cm			LIQUID LIMIT %	PLASTICITY INDEX, %		STRENGTH Kg/cm ²	STRAIN, %	4	10	40	200
21	SS-12	44	SC	SC		Gravelly Clayey SAND; light yellowish brown; fine sand; medium dense.	14	10	16	29				2.64			77	61	56	44
22	SS-13	89	CH	CH		Silly CLAY; yellowish brown; high plasticity; trace of gravel; hard.	19	23	26	45				2.63			100	99	96	
24	SS-14	78	SC	SC		Gravelly Clayey SAND; brownish gray; fine to medium sand; medium to high plasticity fines; very dense.	20	27	29											
25	SS-15	56	SC	SC		Gravelly Clayey SAND; brownish gray; fine to medium sand; medium to high plasticity fines; very dense.	16	30	44	16				2.65			66	55	38	26
27	SS-16	44	SC	SC		Gravelly Clayey SAND; brownish gray; fine to medium sand; medium to high plasticity fines; very dense.	20	20	15											
28	SS-17	89	CH	CH		Sandy CLAY; brownish gray; medium to high plasticity; fine sand; hard.	25	21	35					2.64						
29	SS-18	89	CH	CH		Sandy CLAY; brownish gray; medium to high plasticity; fine sand; hard.	28	30	37	76				2.63			90	81	73	60
30	SS-19	89	CH	CH		End of BOREHOLE														

MACHINE: ACKER ACE
 DRILLER: H. TABANAO
 SUPERVISOR: D. LIGBOS

LEGEND:
 ■ SS - SPLIT SPOON SAMPLE
 □ WS - WASH SAMPLE
 ▨ UDS - UNDISTURBED SAMPLE
 ▨ CR - CORE SAMPLE
 H W/ HYDROMETER ANALYSIS

APPENDIX A-26 Borehole Location Plan. Manila South Harbor

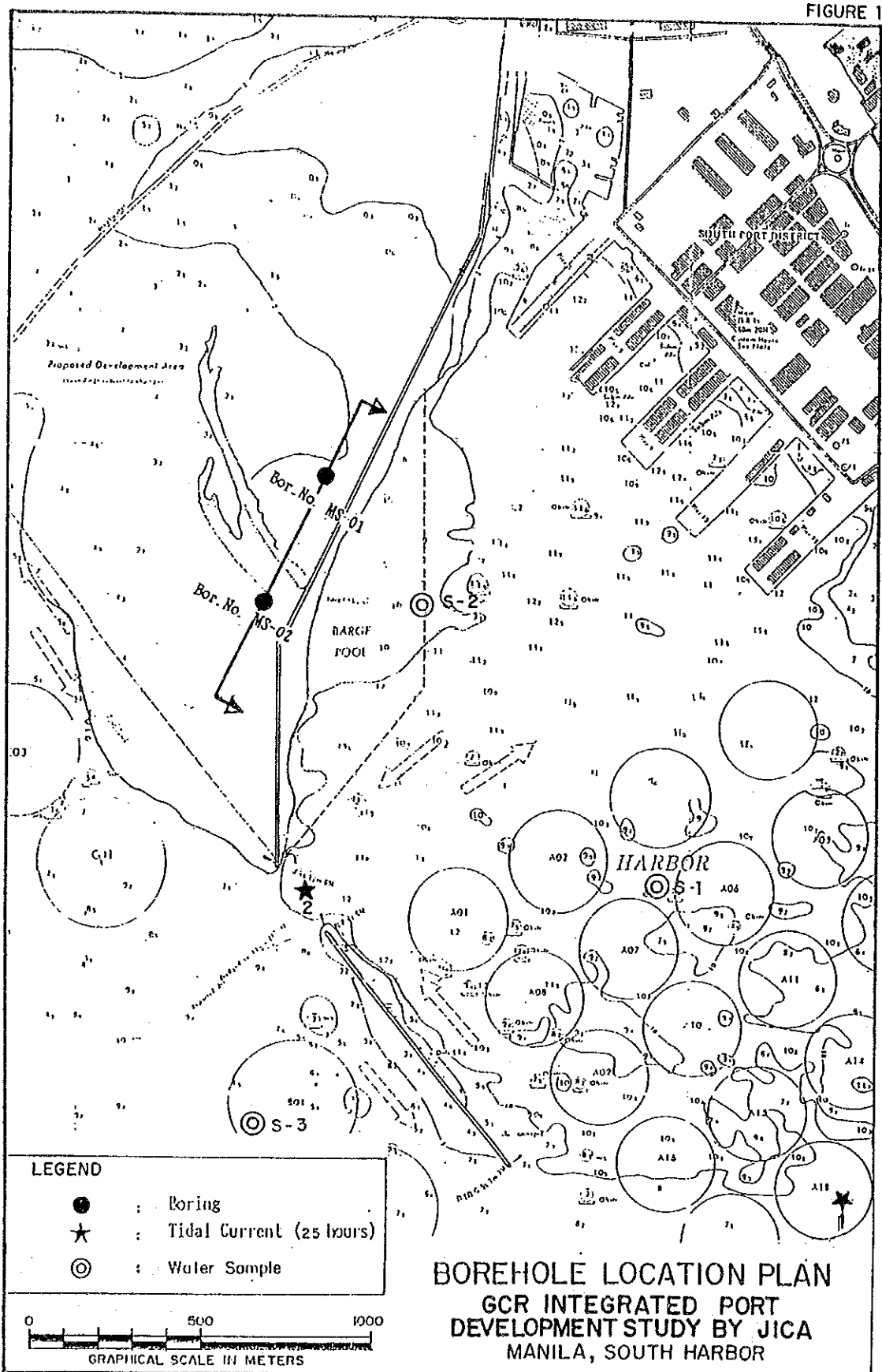
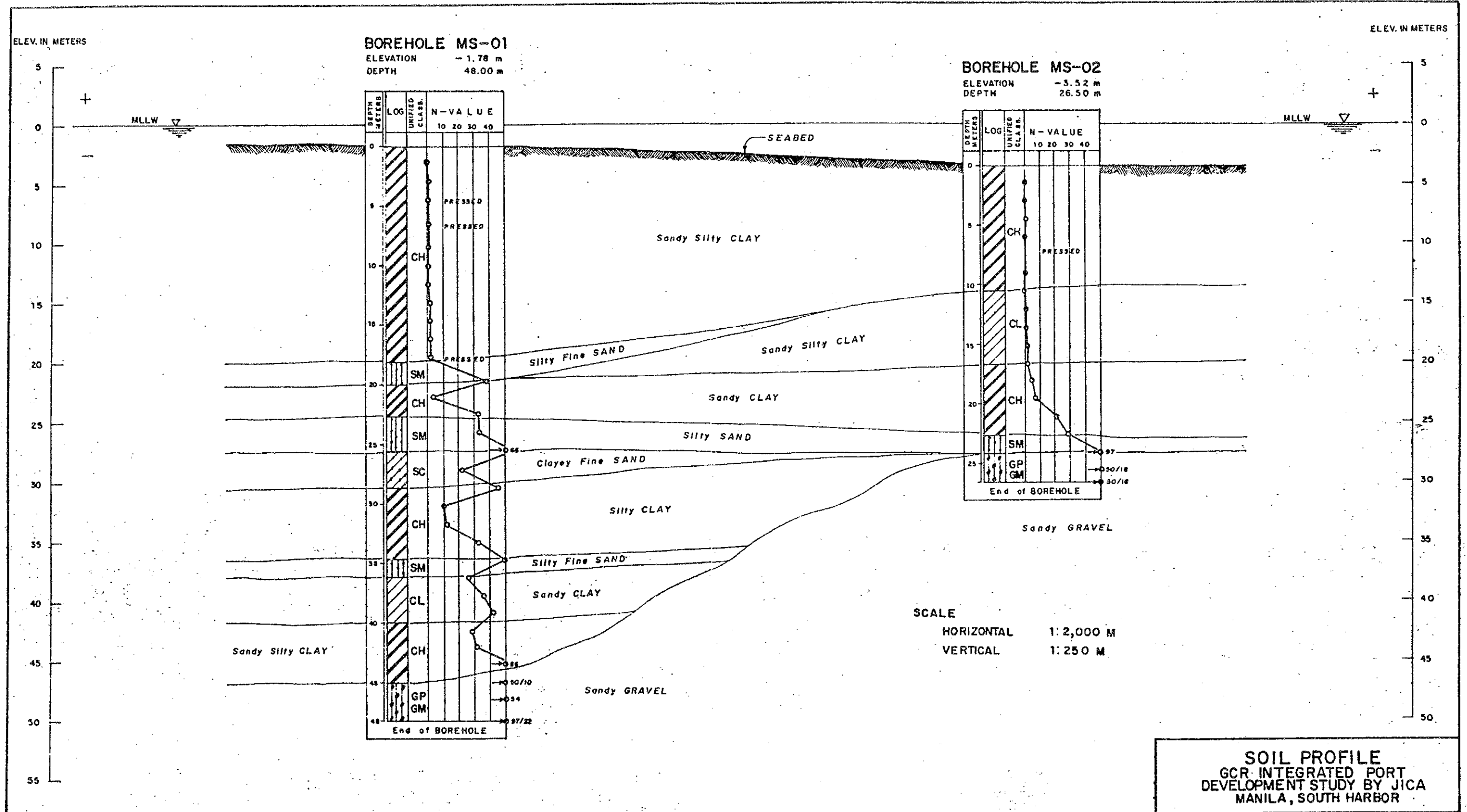


FIGURE 2



APPENDIX A-28 Borehole Log & Test Results No. MS-1 South Harbor

SHEET 1 OF 3

A-1a

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED FORT DEVELOPMENT</u>				GROUND ELEV. <u>-1.78</u> m		WATER LEV. <u>OFFSHORE</u> m																	
LOCATION: <u>SOUTH HARBOR, MANILA</u>				WEATHER: <u>FAIR</u>		DATE GAUGED: <u>18 DEC 93</u>																	
BOREHOLE NO. <u>BH-MS-1</u> DATE DRILLED: <u>14-18 DEC 93</u>				COORDINATES: <u>1,612,711.80</u> N, <u>495,180.08</u> E																			
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL	CLASSIFICATION	ROD %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTERBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE						
							15 cm	15 cm	15 cm			LIQUID LIMIT, %	PLASTICITY INDEX, %		STRENGTH kg/cm ²	STRAIN, %	4	10	40	100			
1	SS-1	100				Silty CLAY; dark gray; high plasticity; presence of shell fragments; very soft.	1	0	0														
3	SS-2	100					0	0	1	96			2.61						100	98			
4	SS-3	100					0	1	0														
5	UDS-1	100				Silty CLAY; brownish gray; high plasticity; traces of shell fragments; very soft.	PRESSED	95	1.40	75	51	2.64	0.32	6.29	98	96	92	88*					
6	SS-4	100					1	0	1														
7	UDS-2	100				Silty CLAY; brownish gray; high plasticity; traces of shell fragments; very soft.	PRESSED	108	1.40	88	65	2.62	0.20	16.57	100	99	99	97*					
8	SS-5	100					1	1	0														
9				CH																			
10	SS-6	89				Sandy Silty CLAY; brownish gray with greenish tinge; high plasticity; with shell fragments; very soft to soft.	1	1	0	75			2.63		96	92	86	79					
11	SS-7	89					1	0	1														
12																							
13	SS-8	89				Sandy Silty CLAY; greenish gray; high plasticity; with abundant shell fragments; soft.	1	1	1														
14	SS-9	89					1	1	1	66						95	84	69	64				
15																							
16	SS-10	89				Sandy Silty CLAY; greenish gray; high plasticity; with abundant shell fragments; soft.	1	1	1														
17	SS-11	89					1	1	1														
18	UDS-3	70				PRESSED	88	1.63	72	46	2.63	0.16	16.57	99	97	94	55*						
19																							
20	SS-12	78			SM	Silty Fine SAND; dark gray; slight to non-plastic fines; dense.	15	19	20														

MACHINE: ACKER ACE
 DRILLER: H. TABANAO
 SUPERVISOR: D. LIGBOS

LEGEND:
 ■ SS - SPLIT SPOON SAMPLE
 □ WS - WASH SAMPLE
 ▨ UDS - UNDISTURBED SAMPLE
 ▩ CR - CORE SAMPLE
 * W/ HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: GCR INTEGRATED PORT DEVELOPMENT				GROUND ELEV. - 1.78 m		WATER LEV. OFFSHORE m														
LOCATION: SOUTH HARBOR, MANILA				WEATHER: FAIR		DATE GAUGED: 18 DEC 93														
BOREHOLE NO. BH-MS-1 DATE DRILLED: 14-18 DEC 93				COORDINATES: 1,612,711.80 N, 495,180.08 E																
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL	CLASSIFICATION	ROD %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTERBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE			
							15 cm	15 cm	15 cm			LIQUID LIMIT %	PLASTICITY INDEX, %		STRENGTH K _c /cm ²	STRAIN, %	4	10	40	200
21	SS-13 89			CH		Sandy Silty CLAY; dark gray; high plasticity; fine sand; soft.	2	2	2	71								100	99	79
22	SS-14 89						11	13	20											
23																				
24	SS-15 89			SM		Silty Fine SAND; dark gray; slightly plastic fines; with shell fragments; very dense.	11	15	19											
25	SS-16 89						14	28	38											
26																				
27	SS-17 100			SC		Clayey Fine SAND; dark gray; medium to high plastic fines; medium dense to dense.	5	10	12											
28	SS-18 09						17	21	25	58										
29																				
30	SS-19 100					Silty CLAY; dark gray; medium to high plasticity; stiff.	5	5	5									100	91	
31	SS-20 100			CH			5	7	6											
32																				
33	SS-21 89					Sandy Silty CLAY; dark gray; medium to high plasticity; fine sand; hard.	12	14	19											
34	SS-22 89						21	23	26											
35																				
36	SS-23 100			SM		Silty Fine SAND; dark gray; medium dense	13	17	10	34		2.64					100	15		
37	SS-24 78						11	17	20											
38																				
39	SS-25 78			CL		Sandy CLAY; brownish gray; medium plasticity; fine sand; hard.	13	19	24											
40																				

MACHINE: ACKER ACE
 DRILLER: H. TABANAO
 SUPERVISOR: D. LIGBOS

LEGEND:
 SS - SPLIT SPOON SAMPLE
 WS - WASH SAMPLE
 UDS - UNDISTURBED SAMPLE
 CR - CORE SAMPLE
 W/ - HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>-1.78</u> in		WATER LEV. <u>OFFSHORE</u> m															
LOCATION: <u>SOUTH HARBOR, MANILA</u>				WEATHER: <u>FAIR</u>		DATE GAUGED: <u>18 DEC 93</u>															
BOREHOLE NO. <u>BH-MS-1</u> DATE DRILLED: <u>14-18 DEC 93</u>				COORDINATES: <u>1,612,711.80</u> N, <u>495,160.08</u> E																	
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL	CLASSIFICATION	R.O.D. %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTERBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE				
							15 cm	15 cm	15 cm			LIQUID LIMIT, %	PLASTICITY INDEX, %		STRENGTH, kg/cm ²	STRAIN, %	4	10	40	200	
41	55-26	100		CH			15	15	14	33								100	96	70	
42	55-27	100		CH		Sandy Silty CLAY ; grayish brown ; high plasticity ; fine sand ; very stiff to hard .	14	15	16												
43	55-28	79		CH			24	36	50												
44																					
45	55-29	44		GP			36	50													
46	55-30	78		GM		Sandy GRAVEL ; brownish gray ; sub - angular ; medium to coarse sand ; traces of non - plastic fines ; dense to very dense .	26	16	38												
47																					
48	55-31	56				End of BOREHOLE	25	47	50	12			2.63			50	29	18	7		

MACHINE: ACKER ACE
 DRILLER: H. TABANAO
 SUPERVISOR: D. LIGBOS

LEGEND:
 SS - SPLIT SPOON SAMPLE
 WS - WASIL SAMPLE
 UDB - UNDISTURBED SAMPLE
 CR - CORE SAMPLE
 H W/ HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>-3.52</u> m				WATER LEV. <u>OFFSHORE</u> m													
LOCATION: <u>SOUTH HARBOR, MANILA</u>				WEATHER: <u>FAIR</u>				DATE GAUGED: <u>4 DEC 93</u>													
BOREHOLE NO. <u>BH-MS-2</u> DATE DRILLED: <u>4 DEC 93</u>				COORDINATES: <u>1,612, 314.143</u> N, <u>195, 006.264</u> E																	
DEPTH, m	SAMPLE NUMBER	RECOVERY %	LOG SYMBOL	CLASSIFICATION	R.C.D. %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTENBERG LIMITS		SPECIFIC GRAVITY	UNCONFIRMED COMB. TEST		SIEVE ANALYSIS % PASSING SIEVE				
							15 cm	15 cm	15 cm			LIQUID LIMIT, %	PLASTICITY INDEX, %		STRENGTH Kg/cm ²	STRAIN, %	4	10	40	100	
1	SS-1	89				Silty CLAY ; grayish brown, high plasticity ; presence of shell fragments ; very soft .	1	0	0	98			2.60			100	99	93			
2																					
3	SS-2	89					1	0	0												
4																					
5	SS-3	89					1	1	0												
6	SS-4	89		CH		Sandy CLAY ; grayish brown, medium to high plasticity ; fine sand ; very soft .	1	0	0	59			2.61			96	93	90	79		
7																					
8	UDS-1	100				Silty CLAY ; greenish gray ; high plasticity ; traces of fine sand and shell fragments ; very soft .				PRESSED	91	1.49	92	71	2.60	Q39	6.29	100	99	98	93
9	SS-5	89					1	0	0												
10	SS-6	89					1	0	0												
11																					
12	SS-7	89				Sandy Silty CLAY ; greenish gray ; medium plasticity ; presence of shell fragments ; very soft .	1	0	1	76			2.63			94	92	89	72		
13	SS-8	89		CL			1	1	0												
14																					
15	SS-9	100				Sandy Silty CLAY ; dark gray ; medium plasticity ; presence of shell fragments ; soft .	2	1	1	51			2.62			100	99	60			
16																					
17	SS-10	100					1	1	1												
18	SS-11	100		CH		Sandy CLAY ; dark brownish gray ; high plasticity ; trace of shell fragments ; firm .	9	4	1												
19																					
20	SS-12	100					3	4	3	99			2.61			100	99	90			

MACHINE: ACKER ACE
 DRILLER: A. TENERIFE / H. TABANAO
 SUPERVISOR: D. LIGBOS

LEGEND:
 ■ SS - SPLIT SPOON SAMPLE
 □ WS - WASH SAMPLE
 ▨ UDS - UNDISTURBED SAMPLE
 ▨ CR - CORE SAMPLE
 * W/ HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS

PROJECT: <u>GCR INTEGRATED PORT DEVELOPMENT</u>				GROUND ELEV. <u>-3.52</u> m		WATER LEV. <u>OFFSHORE</u> m														
LOCATION: <u>SOUTH HARBOR, MANILA</u>				WEATHER: <u>FAIR</u>		DATE GAUGED: <u>4 DEC 93</u>														
BOREHOLE NO. <u>BH-MS-2</u> DATE DRILLED: <u>4 DEC 93</u>				COORDINATES: <u>1,612,314.143</u> N, <u>495,006.264</u> E																
DEPTH, m	SAMPLE NUMBER	RECOVERY % SAMPLE	LOG SYMBOL	CLASSIFICATION	R 60 %	DESCRIPTION	BLOWS (SPT)			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	ATTERBERG LIMITS		SPECIFIC GRAVITY	UNCONFINED COMP. TEST		SIEVE ANALYSIS % PASSING SIEVE			
							15 cm	30 cm	45 cm			LIQUID LIMIT %	PLASTICITY INDEX, %		STRENGTH kg/cm ²	STRAIN, %	4	10	40	100
21	SS-15	100		CH		Sandy CLAY ; brown ; high plasticity ; fine sand ; very stiff .	6	9	12	36				2.62			100	98	95	75
22	SS-14	100		CH																
23				SM		Silty Gravelly SAND ; brown ; medium grained ; sub-angular gravel ; very dense .	11	13	16											
24	SS-15	78		SM			30	47	50	12				2.66			63	44	26	15
25	SS-16	78		GP GM		Silty Sandy GRAVEL ; sub-angular ; medium sand ; very dense .	35		50											
26	SS-17	100		GP GM			50		18								46	35	20	12
						End of BOREHOLE				10				2.67						

MACHINE: ACKER ACE
 DRILLER: A. TENERIFE / H. TABANAO
 SUPERVISOR: D. LIGBOS

LEGEND:
 SS - SPLIT SPOON SAMPLE
 WS - WASH SAMPLE
 UDS - UNDISTURBED SAMPLE
 CR - CORE SAMPLE
 H W/ HYDROMETER ANALYSIS

Appendix B-2

FORM 2 CARGO VEHICLE OD INTERVIEW SURVEY FORM

--	--	--	--

Document Number

Weather Supervisor _____
 Interviewer _____

Station Code _____
 Date _____
 Shift _____
 Direction _____

Line Number	Time (Hour)	Vehicle Type	Vehicle Characteristics	Major Item	Goods Carried		Packing Container	Type	Destination (To, where)	Origin (From, where)
					Load Factor	Size				
1										
2										
3										
4										
5										
6										

- VEHICLE TYPE**
1. JEEP/MPV/PICK-UP
 2. LIGHT CARGO (2 TON)
 3. TRUCK
 4. TRUCK 3-AXLE
 5. DUMP TRUCK
 6. TRAILER w/ CONTAINER
 7. TRAILER HEAD ONLY
 8. TANK/LOBBY

- LOAD FACTOR**
1. Full
 2. 3/4
 3. 1/2
 4. 1/4
 5. Empty

- CONTAINER**
1. DRY
 2. REEFER
 3. Others

- NON-CONTAINER**
1. PALLET
 2. BAG
 3. CARTON
 4. CASE
 5. DRUM
 6. BULK
 7. Others

- SIZE**
1. 20 ft
 2. 40 ft
 3. Others

- SIZE**
1. 20 ft
 2. 40 ft
 3. Others

Appendix B-3

Cargo Vehicle Volume at Susana Heights Station
(By Vehicle type, by Direction)

TYPE OF VEHICLE	DAY 1 & 2 TOTALS							TOTAL
	MUNTINLUPA to MANILA	MANILA to MUNTINLUPA	MUNTINLUPA to CARMONA	CARMONA to MUNTINLUPA	MANILA to CARMONA	CARMONA to MANILA		
Jpny/Van/Pick-up	3,303 72.53%	1,834 54.63%	122 32.80%	184 56.10%	7,778 54.93%	6,435 54.12%	19,656 56.71%	
Light Cargo (2 Tons)	321 7.05%	532 15.85%	83 22.31%	30 9.15%	1,883 13.30%	1,404 11.81%	4,253 12.27%	
Truck (2 Axle)	441 9.68%	480 14.30%	71 19.09%	51 15.55%	1,515 10.70%	1,461 12.29%	4,019 11.59%	
Truck (3 Axle)	120 2.64%	149 4.44%	33 8.87%	19 5.79%	1,282 9.05%	1,031 8.67%	2,634 7.60%	
Dump Truck	106 2.33%	113 3.37%	15 4.03%	23 7.01%	450 3.18%	450 3.78%	1,157 3.34%	
Trailer w/ Container	109 2.39%	59 1.76%	19 5.11%	5 1.52%	617 4.36%	395 3.32%	1,204 3.47%	
Trailer Head Only	36 0.79%	57 1.70%	4 1.08%	4 1.22%	139 0.98%	201 1.69%	441 1.27%	
Tank / Lorry	114 2.50%	126 3.75%	3 0.81%	1 0.30%	434 3.06%	459 3.86%	1,137 3.28%	
Cement Mixer	4 0.09%	7 0.21%	22 5.91%	11 3.35%	62 0.44%	55 0.46%	161 0.46%	
TOTALS	4,554 100.00%	3,357 100.00%	372 100.00%	328 100.00%	14,160 100.00%	11,891 100.00%	34,662 100.00%	

TYPE OF VEHICLE	DAY 1 (18-Nov-93 9AM to 19-Nov-93 4AM)							TOTAL
	MUNTINLUPA to MANILA	MANILA to MUNTINLUPA	MUNTINLUPA to CARMONA	CARMONA to MUNTINLUPA	MANILA to CARMONA	CARMONA to MANILA		
Jpny/Van/Pick-up	1,668 71.83%	932 55.41%	66 35.11%	78 52.00%	3,628 53.92%	2,942 52.09%	9,317 55.71%	
Light Cargo (2 Tons)	166 7.15%	218 12.96%	37 19.68%	12 8.00%	813 12.08%	637 11.28%	1,884 11.26%	
Truck (2 Axle)	221 9.52%	274 16.29%	41 21.81%	28 18.67%	819 12.17%	776 13.74%	2,160 12.92%	
Truck (3 Axle)	54 2.33%	69 4.10%	14 7.45%	10 6.67%	668 9.93%	527 9.33%	1,342 8.03%	
Dump Truck	66 2.84%	68 4.04%	8 4.26%	13 8.67%	194 2.88%	211 3.74%	560 3.35%	
Trailer w/ Container	64 2.76%	21 1.25%	10 5.32%	2 1.33%	293 4.35%	196 3.47%	586 3.51%	
Trailer Head Only	21 0.90%	30 1.78%	1 0.53%	2 1.33%	71 1.06%	93 1.65%	218 1.30%	
Tank / Lorry	59 2.54%	63 3.75%	3 1.60%	1 0.67%	211 3.14%	228 4.04%	565 3.38%	
Cement Mixer	3 0.13%	7 0.42%	8 4.26%	4 2.67%	31 0.46%	38 0.67%	91 0.54%	
TOTALS	2,322 100.00%	1,682 100.00%	188 100.00%	150 100.00%	6,728 100.00%	5,648 100.00%	16,723 100.00%	

TYPE OF VEHICLE	DAY 2 (19-Nov-93 9AM to 20-Nov-93 4AM)							TOTAL
	MUNTINLUPA to MANILA	MANILA to MUNTINLUPA	MUNTINLUPA to CARMONA	CARMONA to MUNTINLUPA	MANILA to CARMONA	CARMONA to MANILA		
Jpny/Van/Pick-up	1,635 73.25%	902 53.85%	56 30.43%	106 59.55%	4,150 55.84%	3,493 55.95%	10,345 57.63%	
Light Cargo (2 Tons)	155 6.94%	314 18.75%	46 25.00%	18 10.11%	1,070 14.40%	767 12.29%	2,371 13.21%	
Truck (2 Axle)	220 9.86%	206 12.30%	30 16.30%	23 12.92%	696 9.36%	685 10.97%	1,861 10.37%	
Truck (3 Axle)	66 2.96%	80 4.78%	19 10.33%	9 5.06%	614 8.26%	504 8.07%	1,292 7.20%	
Dump Truck	40 1.79%	45 2.69%	7 3.80%	10 5.62%	256 3.44%	239 3.83%	597 3.33%	
Trailer w/ Container	45 2.02%	38 2.27%	9 4.89%	3 1.69%	324 4.36%	199 3.19%	618 3.44%	
Trailer Head Only	15 0.67%	27 1.61%	3 1.63%	2 1.12%	68 0.91%	108 1.73%	223 1.24%	
Tank / Lorry	55 2.46%	63 3.76%	0 0.00%	0 0.00%	223 3.00%	231 3.70%	572 3.19%	
Cement Mixer	1 0.04%	0 0.00%	14 7.61%	7 3.93%	31 0.42%	17 0.27%	70 0.39%	
TOTALS	2,232 100.00%	1,675 100.00%	184 100.00%	178 100.00%	7,432 100.00%	6,243 100.00%	17,949 100.00%	

Appendix B-4

Cargo Vehicle Volume at McArthur Highway Station
(By Vehicle type, by Direction)

TYPE OF VEHICLE	DAY 1 & 2 TOTAL					
	MEYCAUAYAN to MANILA		MANILA to MEYCAUAYAN		TOTAL	
Jpny/Var/Pick-up	1,616	55.65%	1,793	54.61%	3,409	55.10%
Light Cargo (2 Tons)	469	16.15%	396	12.06%	865	13.98%
Truck (2 Axle)	392	13.50%	550	16.75%	942	15.23%
Truck (3 Axle)	110	3.79%	197	6.00%	307	4.96%
Dump Truck	224	7.71%	245	7.46%	469	7.58%
Trailer w/ Container	30	1.03%	23	0.70%	53	0.86%
Trailer Head Only	28	0.96%	40	1.22%	68	1.10%
Tank / Lorry	15	0.52%	19	0.58%	34	0.55%
Cement Mixer	20	0.69%	20	0.61%	40	0.65%
TOTALS	2,904	100.00%	3,283	100.00%	6,187	100.00%

TYPE OF VEHICLE	DAY 1 (23--Nov--93 9AM to 24--Nov--93 4AM)					
	MEYCAUAYAN to MANILA		MANILA to MEYCAUAYAN		TOTAL	
Jpny/Var/Pick-up	739	56.11%	884	54.17%	1,623	55.04%
Light Cargo (2 Tons)	228	17.31%	199	12.19%	427	14.48%
Truck (2 Axle)	159	12.07%	275	16.85%	434	14.72%
Truck (3 Axle)	50	3.80%	120	7.35%	170	5.76%
Dump Truck	88	6.68%	103	6.31%	191	6.48%
Trailer w/ Container	13	0.99%	11	0.67%	24	0.81%
Trailer Head Only	19	1.44%	17	1.04%	36	1.22%
Tank / Lorry	8	0.61%	9	0.55%	17	0.58%
Cement Mixer	13	0.99%	14	0.86%	27	0.92%
TOTALS	1,317	100.00%	1,632	100.00%	2,949	100.00%

TYPE OF VEHICLE	DAY 2 (24--Nov--93 9AM to 25--Nov--93 4AM)					
	MEYCAUAYAN to MANILA		MANILA to MEYCAUAYAN		TOTAL	
Jpny/Var/Pick-up	877	55.26%	909	55.06%	1,786	55.16%
Light Cargo (2 Tons)	241	15.19%	197	11.93%	438	13.53%
Truck (2 Axle)	233	14.68%	275	16.66%	508	15.69%
Truck (3 Axle)	60	3.78%	77	4.66%	137	4.23%
Dump Truck	136	8.57%	142	8.60%	278	8.59%
Trailer w/ Container	17	1.07%	12	0.73%	29	0.90%
Trailer Head Only	9	0.57%	23	1.39%	32	0.99%
Tank / Lorry	7	0.44%	10	0.61%	17	0.53%
Cement Mixer	7	0.44%	6	0.36%	13	0.40%
TOTALS	1,587	100.00%	1,651	100.00%	3,238	100.00%

Appendix B-5

Cargo Vehicle Volume at North Diversion Road Station
(By Vehicle Type, by Direction)

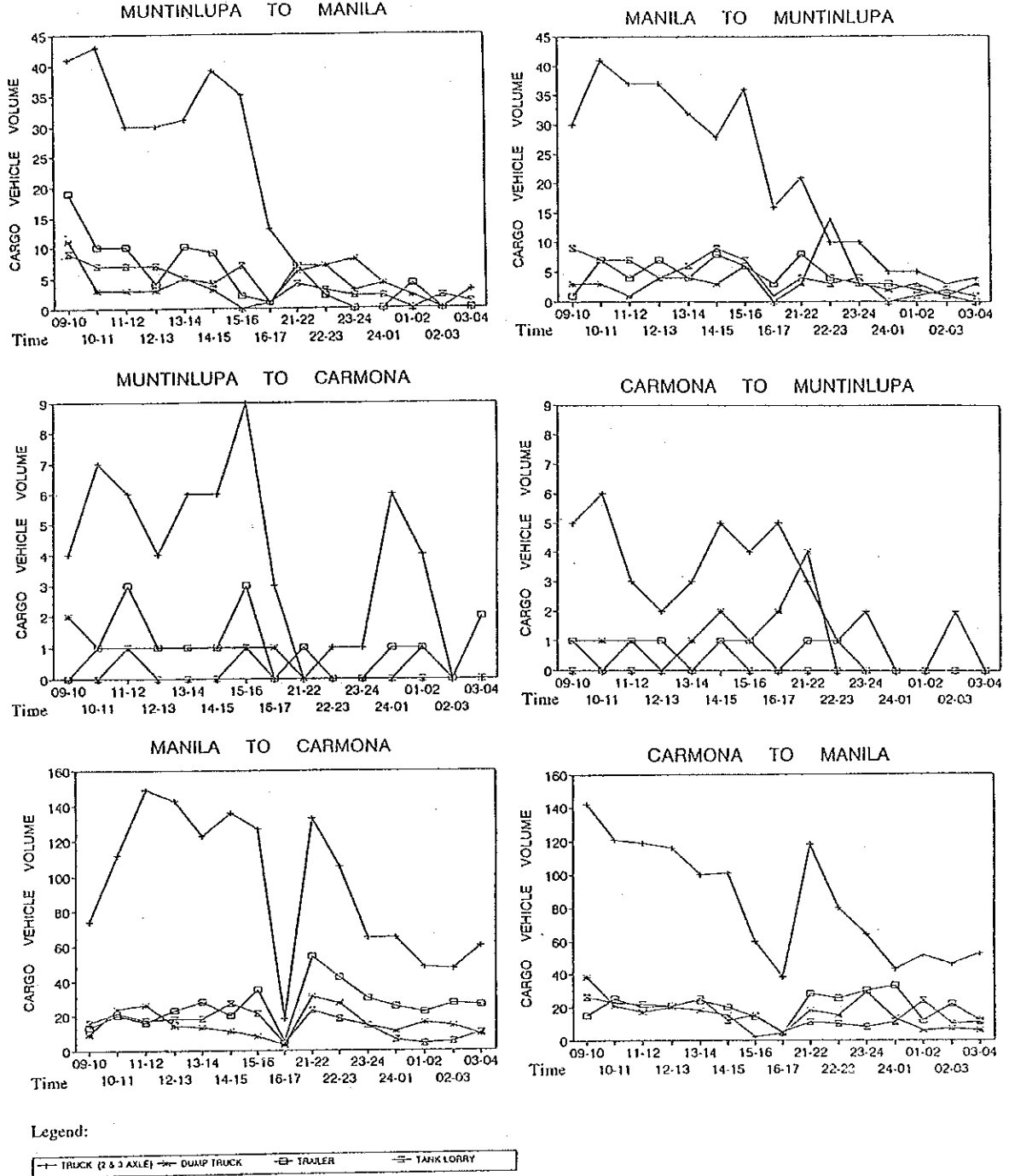
TYPE OF VEHICLE	DAY 1 & 2 TOTAL					
	MANILA to MEYCAUAYAN		MEYCAUAYAN to MANILA		TOTAL	
Jpny/Van/Pick-up	7,262	36.91%	5,838	39.50%	13,100	38.02%
Light Cargo (2 Tons)	3,207	16.30%	2,708	18.32%	5,915	17.17%
Truck (2 Axle)	2,646	13.45%	1,358	9.19%	4,004	11.62%
Truck (3 Axle)	2,906	14.77%	1,874	12.68%	4,780	13.87%
Dump Truck	2,189	11.13%	1,699	11.49%	3,888	11.28%
Trailer w/ Container	801	4.07%	467	3.16%	1,268	3.68%
Trailer Head Only	80	0.41%	263	1.78%	343	1.00%
Tank / Lorry	528	2.68%	480	3.25%	1,008	2.93%
Cement Mixer	56	0.28%	94	0.64%	150	0.44%
TOTALS	19,675	100.00%	14,781	100.00%	34,456	100.00%

TYPE OF VEHICLE	DAY 1 (23-Nov-93 9AM to 24-Nov-93 4AM)					
	MANILA to MEYCAUAYAN		MEYCAUAYAN to MANILA		TOTAL	
Jpny/Van/Pick-up	4,025	43.75%	3,041	40.67%	7,066	42.36%
Light Cargo (2 Tons)	1,267	13.77%	1,359	18.17%	2,626	15.74%
Truck (2 Axle)	983	10.68%	705	9.43%	1,688	10.12%
Truck (3 Axle)	1,210	13.15%	919	12.29%	2,129	12.76%
Dump Truck	1,063	11.55%	831	11.11%	1,894	11.36%
Trailer w/ Container	342	3.72%	187	2.50%	529	3.17%
Trailer Head Only	31	0.34%	133	1.78%	164	0.98%
Tank / Lorry	247	2.68%	253	3.38%	500	3.00%
Cement Mixer	33	0.36%	50	0.67%	83	0.50%
TOTALS	9,201	100.00%	7,478	100.00%	16,679	100.00%

TYPE OF VEHICLE	DAY 2 (24-Nov-93 9AM to 25-Nov-93 4AM)					
	MANILA to MEYCAUAYAN		MEYCAUAYAN to MANILA		TOTAL	
Jpny/Van/Pick-up	3,237	30.91%	2,797	38.30%	6,034	33.94%
Light Cargo (2 Tons)	1,940	18.52%	1,349	18.47%	3,289	18.50%
Truck (2 Axle)	1,663	15.88%	653	8.94%	2,316	13.03%
Truck (3 Axle)	1,696	16.19%	955	13.08%	2,651	14.91%
Dump Truck	1,126	10.75%	868	11.89%	1,994	11.22%
Trailer w/ Container	459	4.38%	280	3.83%	739	4.16%
Trailer Head Only	49	0.47%	130	1.78%	179	1.01%
Tank / Lorry	281	2.68%	227	3.11%	508	2.86%
Cement Mixer	23	0.22%	44	0.60%	67	0.38%
TOTALS	10,474	100.00%	7,303	100.00%	17,777	100.00%

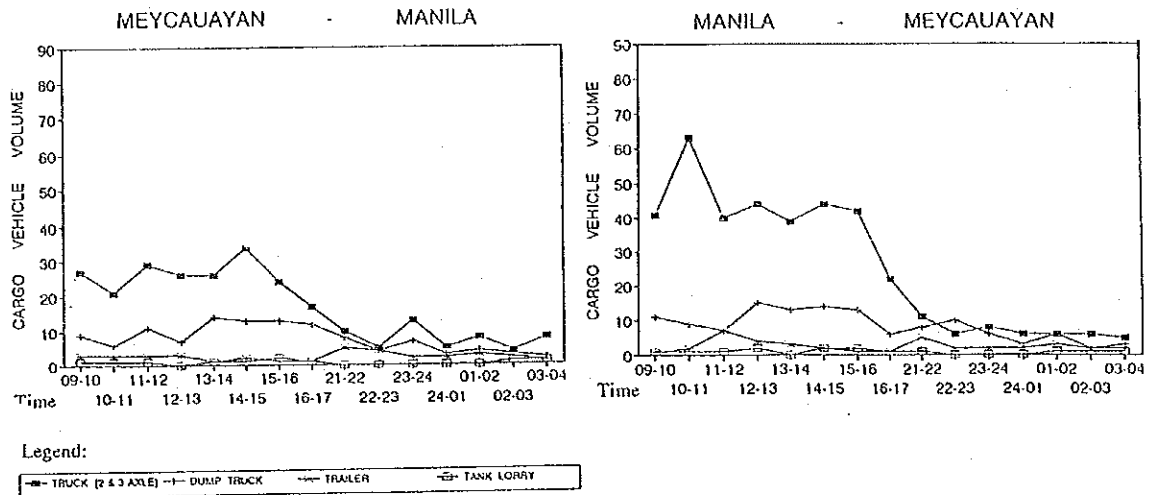
Appendix B-6

Hourly Distribution of Cargo Vehicle Volume
by Vehicle Type, Susana Heights Station
(Average of Two-Day Total)



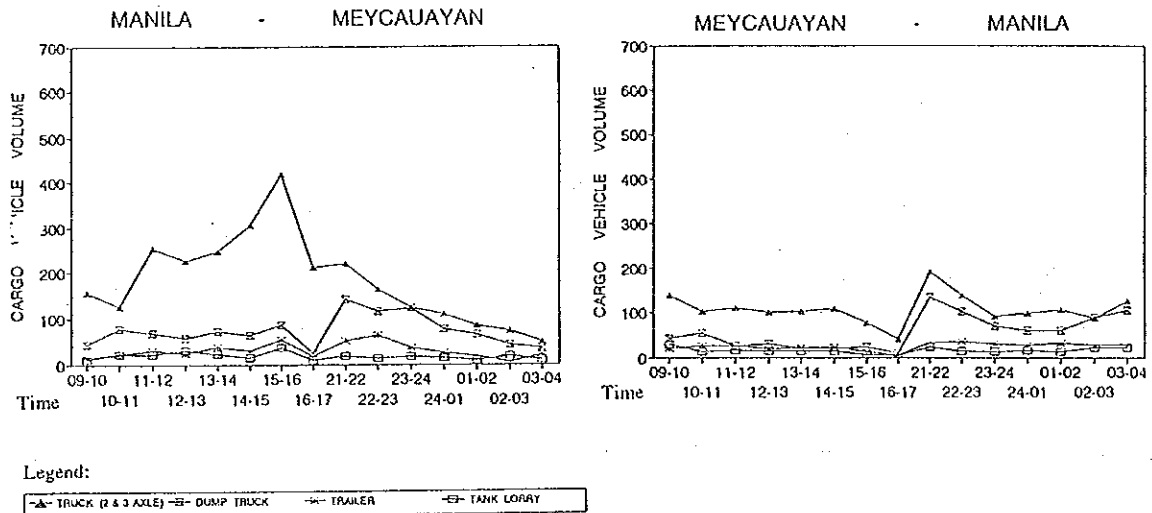
Appendix B-7

Hourly Distribution of Cargo Vehicle Volume
by Vehicle Type, McArthur Highway Station
(Average of Two-Day Total)



Appendix B-8

Hourly Distribution of Cargo Vehicle Volume
by Vehicle Type, North Diversion Road Station
(Average of Two-Day Total)



Appendix B-9

Cargo Vehicle O/D, Susana Heights Station

FROM TO	0101 Ilocos Norte	0103 La Union	0104 Pangasinan	0202 Cagayan	0203 Isabela	0301 Bataan	0302 Bulacan	0303 Nueva Ecija	0304 Pampanga	0305 Tarlac	0402 Batangas	0403 Cavite	0404 Laguna	0405 Marinduque	0406 Occidental	0407 Oriental	0409 H. Quezon	0410 Rizal	0411 Romblon	0501 Albay	0502 Camarines N	0503 Camarines S	0506 Sorsogon	0801 Eastern	
La Union	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
Pangasinan	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	2	0	0	0	1	3	0	1
Isabela	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
Bataan	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
Bulacan	0	0	0	0	0	0	0	0	0	0	0	29	3	17	0	1	1	7	0	0	0	0	0	0	
Nueva Ecija	0	0	0	0	0	0	0	0	0	0	0	7	0	3	0	0	0	1	0	0	0	0	0	0	
Pampanga	0	0	0	0	0	0	0	0	0	0	0	10	10	31	0	0	1	10	0	0	0	2	1	1	
Tarlac	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	
Zambales	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	
Batangas	0	1	0	1	2	1	18	6	4	2	0	0	5	0	0	0	0	0	10	0	0	0	0	0	
Cavite	0	0	0	0	0	0	0	0	16	0	0	0	14	0	0	0	0	0	7	0	0	0	0	0	
Laguna	1	1	2	1	3	0	37	9	44	3	2	16	19	0	0	0	0	2	7	0	0	1	0	0	
Oriental Mindoro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	
Quezon	0	0	1	3	0	1	6	4	5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	
Rizal	0	0	0	0	0	0	0	0	0	0	0	13	12	41	0	0	0	0	0	0	0	0	0	0	
Romblon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Albay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Camarines Norte	0	0	1	0	0	0	3	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
Camarines Sur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sorsogon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Eastern Samar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Northern Samar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Samar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Benguet	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	
Manila	0	0	0	0	0	0	0	0	0	0	43	7	88	1	2	12	15	0	0	0	2	1	6	0	
Mandaluyong	0	0	0	0	0	0	0	0	0	0	3	1	27	0	0	0	4	0	0	0	0	0	0	0	
Marikina	0	0	0	0	0	0	0	0	0	0	2	0	10	1	0	0	7	0	0	1	0	0	0	0	
Pasig	0	0	0	0	0	0	0	0	0	0	25	4	50	0	0	2	10	0	0	0	0	0	8	0	
Quezon City	0	0	0	0	0	0	0	0	0	0	31	5	87	0	3	5	25	0	1	3	2	5	0	0	
San Juan	0	0	0	0	0	0	0	0	0	0	3	1	2	0	0	0	1	0	0	0	0	0	0	0	
Caloocan City	0	0	0	0	0	0	0	0	0	0	5	4	13	0	0	0	7	0	0	1	1	0	1	1	
Malabon	0	0	0	0	0	0	0	0	0	0	4	0	7	0	2	0	10	0	0	1	1	0	1	1	
Navotas	0	0	0	0	0	0	0	0	0	0	2	1	7	0	0	0	1	0	0	0	0	2	0	0	
Valenzuela	0	0	0	0	0	0	0	0	0	0	5	0	26	1	1	0	13	0	0	0	0	1	0	0	
Las Pinas	0	0	0	0	0	0	0	0	0	0	5	2	29	0	0	0	4	0	0	0	0	1	0	0	
Makati	0	0	0	0	0	0	0	0	0	0	6	6	29	0	0	0	6	0	0	1	0	0	0	0	
Muntinlupa	0	0	0	0	0	0	1	0	25	0	18	80	120	0	0	1	6	5	0	2	0	0	0	0	
Paranaque	0	0	0	0	0	0	0	0	0	0	6	5	21	0	0	0	3	0	0	0	0	0	0	0	
Pasay City	0	0	0	0	0	0	0	0	0	0	1	2	19	0	0	0	4	0	0	1	1	1	1	1	
Taguig	0	0	0	0	0	0	0	0	0	0	12	10	73	0	0	0	3	0	0	2	0	1	0	0	
NORTH HARBOR	0	0	0	0	0	0	0	0	0	0	6	3	53	0	0	0	1	0	0	0	0	0	0	0	
MICT	0	0	0	0	0	0	0	0	0	0	1	4	11	0	0	0	1	0	0	0	0	0	0	0	
SOUTH HARBOR	0	0	0	0	0	0	0	0	0	0	1	1	16	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	1	2	4	5	5	2	65	19	95	5	246	177	827	3	9	22	153	87	1	17	13	28	5		

Appendix B-10

Cargo Vehicle O/D, McArthur Highway Station

FROM TO	0101 Ilocos Nort	0102 Ilocos Sur	0104 Pangasinan	0203 Isabela	0204 Nueva Vizca	0301 Bataan	0302 Bulacan	0303 Nueva Ecija	0304 Pampanga	0305 Tarlac	0401 Aurora	0401 Laguna	0410 Rizal	1302 Benguet	1401 Manila	1402 Mandaluyong	1403 Marikina	1404 Pasig	1405 Quezon City	1406 San Juan	1407 Caloocan Ci	1408 Malabon	1409 Navotas
Pangasinan	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Isabela	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Nueva Vizcaya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Bataan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Bulacan	0	0	0	0	0	0	1	104	1	13	1	0	3	2	0	26	1	3	2	22	4	20	79
Nueva Ecija	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
Pampanga	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	1	0	0	1	17
Tarlac	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Batangas	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cavite	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laguna	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Rizal	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Benguet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manila	0	0	0	0	0	0	0	36	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Mandaluyong	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marikina	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasig	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quezon City	1	0	0	0	0	0	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloocan City	0	0	0	0	0	0	0	29	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Malabon	0	0	1	0	0	0	0	63	2	17	0	0	0	0	0	0	0	0	0	1	0	0	0
Navotas	0	0	0	0	0	0	1	15	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
Valenzuela	0	1	0	0	3	1	2	251	4	24	2	3	0	0	2	1	0	1	1	4	0	1	0
Las Pinas	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Makati	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muntinlupa	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paranaque	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasay City	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Taguig	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH HARBOR	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MICT	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH HARBOR	0	0	0	0	0	0	0	10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1	1	1	3	1	4	605	10	68	3	4	3	2	2	31	1	4	4	27	4	23	105	9

Appendix B-11

Cargo Vehicle O/D, North Diversion Road

FROM TO	0101 Ilocos Norte	0102 Ilocos Sur	0103 La Union	0104 Pangasinan	0202 Cagayan	0203 Isabela	0204 Nueva Vizca	0301 Bataan	0302 Bulacan	0303 Nueva Ecija	0304 Paopanga	0305 Tarlac	0306 Zambales	0402 Batangas	0403 Cavite	0404 Laguna	0406 Occidental	0407 Oriental	0409 Quezon	0410 Rizal	0502 Canarines N	0503 Canarines S	1301 Abra	1302 Benguet
Ilocos Norte	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilocos Sur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
La Union	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pangasinan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	2	0	0	0
Cagayan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isabela	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	1	0	0	0
Nueva Vizcaya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bataan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	4	0	0	0
Bulacan	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	6	15	1	2	9	33	1	1	0
Nueva Ecija	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	3	2	0	0	0
Paopanga	0	0	0	0	0	0	0	0	0	1	0	0	0	0	8	42	17	0	0	9	37	1	1	0
Tarlac	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	2	0	1	2	1	0	0	0
Zambales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0
Batangas	0	0	0	3	0	5	0	0	9	4	12	0	0	0	0	0	0	0	0	0	0	0	0	0
Cavite	0	0	1	0	0	1	1	2	13	2	72	0	0	0	0	0	0	0	0	0	0	0	0	0
Laguna	0	0	0	1	0	0	0	0	16	3	37	1	1	0	0	0	0	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Quezon	0	0	0	1	1	0	0	0	4	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Rizal	0	0	1	1	2	0	0	30	16	2	47	1	1	0	0	0	0	0	0	0	0	0	0	0
Albay	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canarines Sur	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Abra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Benguet	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0
Ifugao	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kalinga-Apayao	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manila	2	0	0	2	2	12	1	6	84	21	40	6	2	0	0	0	0	0	0	0	0	0	0	0
Mandaluyong	0	0	0	0	0	1	0	0	8	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
Marikina	6	0	1	0	0	0	0	1	17	2	7	1	0	0	0	0	0	0	0	0	0	0	0	0
Pasig	3	0	0	2	1	4	0	1	18	3	37	3	1	0	0	0	0	0	0	0	0	0	0	0
Quezon City	1	0	5	10	0	5	3	5	154	13	159	4	2	0	0	0	0	0	0	0	0	0	0	1
San Juan	0	0	0	0	0	0	0	0	8	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloocan City	0	0	0	1	0	2	0	0	57	4	25	1	0	0	0	0	0	0	0	0	0	0	0	0
Malabon	0	1	0	2	1	0	2	0	11	4	4	0	1	0	0	0	0	0	0	0	0	0	0	0
Navotas	0	0	0	0	0	0	0	0	6	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Valenzuela	2	0	1	3	1	5	0	6	196	8	78	2	1	0	0	0	0	0	0	0	0	0	0	1
Las Pinas	0	0	0	0	0	0	0	0	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
Makati	1	0	0	0	0	0	0	1	14	3	14	1	0	0	0	0	0	0	0	0	0	0	0	0
Muntinlupa	0	0	0	0	0	1	0	0	10	0	19	0	1	0	0	0	0	0	0	0	0	0	0	0
Paranaque	0	0	1	0	0	2	0	0	10	1	15	2	0	0	0	0	0	0	0	0	0	0	0	0
Pasay City	0	0	0	0	0	0	0	0	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
Taguig	0	0	0	0	0	0	0	0	6	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0
NORTH HARBOR	0	0	1	0	0	0	0	0	11	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
NICT	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH HARBOR	0	0	0	0	0	0	0	6	4	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
TOTAL	9	1	11	27	8	38	7	53	684	75	603	26	12	26	53	4	1	3	24	82	2	2	2	2

Appendix B-12

Commodity O/D, Susana Heights Station

FROM TO	0103 La Union	0104 Pangasinan	0202 Cagayan	0203 Isabela	0301 Bataan	0302 Bulacan	0303 Nueva Ecija	0304 Pampanga	0305 Tarlac	0402 Batangas	0403 Cavite	0404 Laguna	0405 Marikina	0406 Occidental	0407 Oriental	0409 Rizal	0410 Quezon	0411 Roxas	0501 Albay	0502 Camarines N	0503 Camarines S	0506 Cebu	0601 Eastern Samar	0605 Samar	
La Union	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,500	0	0	0	0	0	0	0	0
Pangasinan	0	0	0	0	0	0	0	0	0	1,750	0	27,150	0	0	0	0	4,025	0	0	8,000	24,000	0	0	6,000	0
Isabela	0	0	0	0	0	0	0	0	0	0	0	12,000	0	0	0	0	0	0	0	0	0	0	0	0	0
Bataan	0	0	0	0	0	0	0	0	0	0	0	1,250	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulacan	0	0	0	0	0	0	0	0	0	223,113	23,000	108,750	0	10,000	1,987	64,155	0	0	0	0	0	0	0	0	0
Nueva Ecija	0	0	0	0	0	0	0	0	0	15,250	0	50,000	0	0	0	0	0	0	0	0	18,375	0	15,000	0	0
Pampanga	0	0	0	0	0	0	0	0	0	64,250	14,270	168,250	0	0	1,790	87,250	0	0	0	0	0	0	16,308	0	0
Tarlac	0	0	0	0	0	0	0	0	0	1,400	0	14,000	0	0	0	0	0	0	0	0	0	0	0	0	0
Batangas	0	0	0	0	0	0	0	0	0	1,500	0	2,250	0	0	0	0	0	0	0	0	0	0	0	0	0
Cavite	0	0	2,900	22,500	19,000	151,120	52,000	55,000	16,200	0	0	25,000	0	0	0	0	0	98,325	0	0	0	0	0	0	0
Laguna	22,000	11,000	10,000	69,000	0	284,200	107,700	493,212	11,000	29,000	59,105	50,427	0	0	0	0	1,300	629,875	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,750	0	0	0	0	0	0	0
Quezon	0	0	35,000	0	4,500	59,000	14,250	45,000	0	0	0	0	0	0	0	0	0	294	0	0	0	0	0	0	0
Rizal	0	0	0	0	0	0	0	0	0	57,363	7,350	196,190	0	0	0	0	0	0	0	0	0	0	0	0	0
Roxas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Albay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camarines Norte	0	3,000	0	0	0	27,000	0	15,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camarines Sur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastern Samar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Samar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Benguet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manila	0	0	0	0	0	0	0	0	0	106,665	7,125	410,258	3,750	6,010	22,400	65,200	0	0	4,500	3,100	55,850	0	0	0	0
Handaluyong	0	0	0	0	0	0	0	0	0	7,373	0	193,763	0	0	0	35,100	0	0	0	0	0	0	0	0	0
Marikina	0	0	0	0	0	0	0	0	0	12,950	0	18,258	1,200	0	0	39,700	0	0	330	0	0	0	0	0	0
Pasig	0	0	0	0	0	0	0	0	0	205,375	575	166,313	0	0	12,450	33,325	0	0	0	0	41,555	0	0	0	0
Quezon City	0	0	0	0	0	0	0	0	0	144,011	16,400	273,848	0	4,450	19,650	119,148	0	2,400	4,820	17,250	27,750	0	0	0	0
San Juan	0	0	0	0	0	0	0	0	0	1,030	1,800	10,950	0	0	0	16,000	0	0	0	0	0	0	0	0	0
Caloocan City	0	0	0	0	0	0	0	0	0	31,453	27,900	22,675	0	0	0	42,375	0	0	0	2,550	0	6,600	0	0	
Halabon	0	0	0	0	0	0	0	0	0	23,500	0	13,038	0	8,775	0	98,250	0	0	1,500	790	0	3,000	2,000	0	
Navotas	0	0	0	0	0	0	0	0	0	5,000	0	32,760	0	0	0	15,000	0	0	0	0	6,000	0	0	0	
Valenzuela	0	0	0	0	0	0	0	0	0	25,950	0	70,228	3,375	2,200	0	128,735	0	0	0	0	0	0	0	0	
Las Pinas	0	0	0	0	0	0	0	0	0	10,175	2,000	200,975	0	0	0	22,030	0	0	0	3,200	0	0	0	0	
Mabini	0	0	0	0	0	0	0	0	0	16,190	18,950	88,936	0	0	0	33,000	0	0	0	0	0	0	0	0	
Huntinlupa	0	0	0	0	0	7,500	0	288,163	0	62,985	276,115	421,873	0	0	1,750	20,590	43,500	0	14,884	0	0	0	0	0	
Paranaque	0	0	0	0	0	0	0	0	0	24,750	14,900	53,980	0	0	0	25,800	0	0	0	0	0	0	0	0	
Pasay City	0	0	0	0	0	0	0	0	0	0	1,500	55,950	0	0	0	9,625	0	0	6,000	313	4,200	2,400	0	0	
Taguig	0	0	0	0	0	0	0	0	0	75,575	34,800	359,835	0	0	0	8,555	0	0	32,000	0	0	0	0	0	
NORTH HARBOR	0	0	0	0	0	0	0	0	0	64,140	1,230	504,795	0	0	0	210	0	0	0	0	0	0	0	0	
HICT	0	0	0	0	0	0	0	0	0	15,443	0	106,100	0	0	0	19,000	0	0	0	0	0	0	0	0	
SOUTH HARBOR	0	0	0	0	0	0	0	0	0	21,000	3,500	67,450	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	22,000	13,000	48,800	92,500	14,500	532,889	185,500	984,290	57,200	1,331,271	515,920	3,682,512	9,325	21,435	59,437	215,933	876,744	2,400	72,034	81,578	151,363	34,400	2,000	0	

0503	0506	0801	0805	1302	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1417	3010	3020	3030	GRAND TOTAL	
Cararines S Sorogon		Eastern S. Samar		Bohual	Manila	Mandaluyong	Marikina	Pasig	Quezon City	San Juan	Caloocan	La Halalan	Navotas	Valenzuela	Las Pinas	Marikina	Montinola	Parangue	Paray City	Taguig	NORTH HARBO	WICT	SOUTH HARBO		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,500	
0	6,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71,525	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,000	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,950	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	441,005	
0	15,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39,625	
16,308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,000	0	0	0	0	0	0	235,928	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,200	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,250	
0	0	0	0	0	192,907	8,700	12,925	31,150	144,310	17,090	12,000	12,000	15,000	78,300	62,875	74,690	176,320	12,300	39,488	52,075	67,000	11,000	57,780	1,514,825	
0	0	0	0	0	64,825	22,025	4,500	7,500	31,990	3,600	24,100	0	0	1,665	0	8,400	243,790	25,395	3,750	39,550	39,470	59,000	96,565	1,060,030	
0	0	0	0	0	306,926	111,500	66,950	254,808	639,296	12,845	45,100	67,520	18,000	213,075	73,235	205,676	866,292	165,428	59,793	281,796	635,710	191,000	435,390	6,958,807	
0	0	0	0	0	0	0	0	0	21,000	0	0	0	0	12,000	0	0	0	0	0	0	0	0	0	46,750	
0	0	0	0	0	7,500	83,815	0	2,000	4,600	89,703	0	6,000	22,000	0	55,800	0	7,000	127,000	9,750	0	10,000	37,000	22,600	43,000	695,912
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,500	0	0	0	0	0	0	307,013	
0	0	0	0	0	0	5,625	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,625	
0	0	0	0	0	0	29,200	0	0	8,000	0	30,000	31,500	2,000	0	0	0	0	13,250	0	0	0	0	0	0	112,950
0	0	0	0	0	0	27,033	0	0	12,000	10,825	0	0	0	0	0	9,000	7,500	0	0	0	0	0	11,000	0	136,146
0	0	0	0	0	3,600	124,300	0	0	0	0	10,000	0	0	12,000	0	0	5,400	1,050	0	0	0	0	0	0	156,350
0	0	0	0	0	0	0	0	0	0	0	0	10,000	0	0	0	0	0	0	0	0	0	0	0	0	10,000
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,000	0	0	0	0	0	8,000
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34,810
55,850	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24,300	0	0	0	0	0	0	0	811,158
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,950	0	0	0	0	0	0	0	150,186
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,350	0	0	0	0	0	0	0	73,298
41,355	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,500	0	0	0	0	0	0	0	470,643
27,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31,500	0	0	0	0	0	0	0	712,027
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29,800
0	8,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,000	0	0	0	0	0	0	0	145,953
0	3,000	2,000	4,000	0	0	0	0	0	0	0	0	0	0	0	0	0	33,000	0	0	0	0	0	0	0	187,853
6,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	0	0	0	0	0	0	190,760
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230,488
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,650	0	0	0	0	0	0	0	250,030
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,000	0	0	0	0	0	0	0	159,076
0	0	0	0	0	163,678	7,000	34,963	15,550	242,575	650	19,900	7,400	1,125	25,655	215,543	12,963	20,506	113,515	17,038	27,500	35,800	10,000	0	2,108,631	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24,230	0	0	0	0	0	0	0	143,660
4,200	2,400	0	6,750	0	0	0	0	0	0	0	0	0	0	0	0	0	3,150	0	0	0	0	0	0	0	89,888
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23,033	0	0	0	0	0	0	0	533,798
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	570,375
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140,543
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91,960
151,363	34,400	2,000	10,750	11,100	1,597,309	149,225	121,338	333,608	1,179,699	34,185	147,100	159,108	36,125	399,495	351,653	317,729	1,713,971	341,688	128,069	411,321	814,980	293,000	647,735	18,990,318	



Appendix B-13

Commodity O/D, McArthur Highway Station

FROM TO	0101 Ilocos Nort	0203 Isabela	0204 Nueva Vizca	0301 Bataan	0302 Bulacan	0303 Nueva Ecija	0304 Pampanga	0401 Aurora	0404 Laguna	1302 Benguet	1401 Manila	1402 Mandaluyong	1403 Marikina	1404 Pasig	1405 Quezon City	1406 San Juan	1407 Caloocan Ci	1408 Malabon	1409 Navotas	1410 Valenzuela	1411 Las Pinas	1412 Makati	1413 Muntinlupa	
Pangasinan		0	0	0	2,200	0	0	0	0	0	0	0	0	0	0	0	0	4,150	0	11,900	0	0	0	
Isabela		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,750	7,350	0	0	0	
Nueva Vizcaya		0	0	0	0	0	0	0	0	0	2,200	0	0	0	0	0	0	0	0	0	0	0	0	
Bataan		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,000	0	9,765	0	0	0	
Bulacan		0	0	0	179,154	0	39,035	0	4,325	0	76,110	10,800	2,950	10,800	62,920	8,525	22,963	106,942	18,930	474,293	11,000	10,950	6,550	
Nueva Ecija		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,500	883	29,000	0	0	0	
Pampanga		0	0	0	14,600	0	0	0	0	0	3,000	0	0	0	0	0	0	1,463	12,500	1,150	101,556	3,150	0	
Tarlac		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	440	288	7,400	0	0	0	
Batangas		0	0	0	3,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cavite		0	0	0	4,560	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laguna		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,600	0	0	0	0	0	
Rizal		0	0	0	24,760	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,400	0	
Benguet		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Manila		0	0	0	134,223	0	5,600	0	0	0	0	0	0	0	0	0	0	0	0	300	0	0	0	
Mandaluyong		0	0	0	300	1,500	0	0	0	0	0	0	0	0	0	0	0	0	0	1,300	0	0	0	
Marikina		0	0	0	26,415	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pasig		0	0	0	750	24,060	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Quezon City	2,400	0	0	0	76,435	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,182	0	0	0	
Caloocan City	0	0	0	0	129,325	0	11,500	0	0	0	0	0	0	0	0	0	0	0	0	3,750	0	2,400	0	
Malabon	0	0	0	0	260,315	8,050	153,601	0	0	0	0	0	0	0	10,000	0	0	0	0	0	0	0	0	
Navotas	0	0	0	1,200	70,205	0	100,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Valenzuela	0	17,300	2,750	1,200	1,051,335	13,138	97,805	21,600	4,800	5,000	0	0	0	988	2,188	0	620	0	0	13,500	0	0	0	
Las Pinas	0	0	0	0	2,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,500	0	0	0	
Makati	0	0	0	0	6,575	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Muntinlupa	0	0	0	0	9,950	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Parangue	0	0	0	0	4,060	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pasay City	0	0	0	0	500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taguig	0	0	0	0	1,125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NORTH HARBOR	0	0	0	0	84,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SOUTH HARBOR	0	0	0	0	77,630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	2,400	17,300	2,750	2,400	2,154,037	46,198	416,041	21,600	4,325	4,800	86,310	10,800	2,950	11,783	75,108	8,525	25,483	141,980	3,150	684,300	11,000	10,950	6,550	

Appendix B-13

Commodity O/D, McArthur Highway Station

0301	0302	0303	0304	0401	0404	1302	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	3010	3030	GRAND TOTAL		
Nueva Vizca	Bulacan	Nueva Ecija	Pasapanga	Aurora	Laguna	Benguet	Manila	Mandaluyong	Marikina	Pasig	Quezon City	San Juan	Calooras	Ci Malabon	Marikina	Marikina	Las Pinas	Makati	Marikina	Parañaque	NORTH HAI	SOUTH HAI	GRAND TOTAL		
0	0	2,200	0	0	0	0	0	0	0	0	0	0	0	4,150	0	11,300	0	0	0	0	0	0	0	17,750	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,750	7,350	0	0	0	0	0	0	0	24,100	
0	0	0	0	0	0	0	0	2,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,200	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,000	0	9,765	0	0	0	0	0	0	0	20,765	
0	0	179,154	0	39,035	0	4,325	0	76,110	10,800	2,950	10,800	62,920	8,525	22,965	106,942	18,930	474,293	11,000	10,950	6,550	3,728	139,550	45,430	1,234,952	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,500	883	29,000	0	0	0	0	0	0	35,383	
0	0	14,600	0	0	0	0	0	3,000	0	0	0	0	0	1,463	12,500	1,150	101,556	0	3,150	0	5,223	0	0	142,642	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	443	288	0	7,400	0	0	0	0	0	0	8,128	
0	0	3,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,400
0	0	4,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,500
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,600	0	0	0	0	0	0	0	0	0	1,600
0	0	24,760	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24,760
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,400
0	0	134,223	0	5,600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,400	0	0	0	0	0	140,123
0	0	300	1,500	0	0	0	0	0	0	0	0	0	0	0	0	0	1,200	0	0	0	0	0	0	0	3,900
0	0	26,415	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26,415
0	0	750	24,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24,750
0	0	76,435	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81,023
0	0	126,325	0	11,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145,975
0	0	260,315	8,050	153,601	0	0	0	0	0	0	0	10,000	0	0	0	0	0	0	0	0	0	0	0	0	432,987
0	1,200	70,265	0	108,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	179,905
2,750	1,200	1,051,335	13,138	97,805	21,600	0	4,800	5,000	0	0	988	2,188	0	625	0	13,500	0	0	0	375	0	0	0	0	1,232,604
0	0	2,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,100
0	0	6,575	0	0	0	0	0	0	0	0	0	0	0	0	0	1,500	0	0	0	0	0	0	0	0	8,525
0	0	9,950	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,950
0	0	4,860	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,860
0	0	500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	500
0	0	1,125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,125
0	0	84,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84,750
0	0	77,630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77,630
2,750	2,400	2,154,037	46,188	416,911	21,600	4,325	4,800	86,310	10,800	2,950	11,788	75,168	8,525	25,488	141,980	31,000	584,000	11,000	10,950	6,550	10,347	139,550	45,430	3,116,000	

Appendix B-14

Commodity O/D, North Diversion Road

FROM TO	0101 Ilocos Nort	0102 Ilocos Sur	0103 La Union	0104 Pangasinan	0202 Cagayan	0203 Isabela	0204 Nueva Vizca	0301 Bataan	0302 Bulacan	0303 Nueva Ecija	0304 Pampanga	0305 Tarlac	0306 Zambales	0402 Batangas	0403 Cavite	0404 Laguna	0406 Occidental	0407 Oriental	0409 Mi Quezon	0410 Rizal	0502 Camarines N	0503 Camarines S	1301 Abra	130 Ber	
Ilocos Norte	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ilocos Sur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
La Union	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pangasinan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,600	0	0	0	10,000	12,000	0	0	0	0	0
Cagayan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isabela	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,000	0	15,500	0	0	19,000	0	0	0	0	0
Nueva Vizcaya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bataan	0	0	0	0	0	0	0	0	0	0	0	0	0	12,000	0	0	0	0	0	12,000	0	0	0	0	0
Bulacan	0	0	0	0	0	0	0	0	3,000	0	0	0	0	91,000	18,890	73,340	2,800	11,000	83,400	162,758	2,625	0	0	0	0
Nueva Ecija	0	0	0	0	0	0	0	0	0	0	0	0	0	9,000	0	31,000	0	0	11,250	4,000	0	0	0	0	0
Tarlac	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,585	49,900	0	0	51,175	46,215	2,300	2,326	0	0	0
Zambales	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	24,000	0	1,500	24,000	0	0	0	0	0	0
Batangas	0	0	0	37,500	0	69,000	0	0	75,250	13,950	121,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cavite	0	0	10,500	0	0	12,000	7,850	3,600	106,800	21,000	799,130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laguna	0	0	0	2,450	0	0	0	0	84,085	17,500	386,650	0	10,500	0	0	0	0	0	0	0	0	0	0	0	0
Oriental Mindoro	0	0	0	0	0	0	0	0	0	0	3,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quezon	0	0	0	0	10,000	0	0	0	33,650	6,600	0	0	7,000	0	0	0	0	0	0	0	0	0	0	0	0
Rizal	0	0	1,875	2,000	20,000	0	0	303,500	75,068	9,400	470,975	10,000	0	0	0	0	0	0	0	0	0	0	0	0	0
Albay	0	0	0	0	0	0	0	0	10,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camarines Sur	0	0	0	2,000	0	0	0	0	12,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Abra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Benguet	0	0	0	0	0	0	0	0	0	0	0	0	0	3,750	0	1,250	0	0	0	7,000	0	0	0	0	0
Ifugao	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kalinga-Apayao	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manila	12,000	0	0	12,000	31,000	139,300	1,000	40,000	362,570	168,390	349,000	44,100	10,500	0	0	0	0	0	0	0	0	0	0	0	0
Mandaluyong	0	0	0	0	0	0	0	0	78,000	0	90,052	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marikina	0	0	12,000	0	0	0	0	12,000	76,480	13,000	66,800	9,000	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasig	43,600	0	0	1,975	12,000	30,000	0	5,930	106,201	24,000	329,580	600	10,500	0	0	0	0	0	0	0	0	0	0	0	0
Quezon City	4,000	0	10,950	56,300	0	27,310	6,125	54,000	667,067	72,830	1,609,210	2,500	5,375	0	0	0	0	0	0	0	0	0	0	0	10,000
San Juan	0	0	0	0	0	0	0	0	33,600	11,945	32,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloocan City	0	0	0	3,500	0	14,700	0	0	298,161	24,900	190,620	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Malabon	0	4,210	0	8,500	0	0	11,750	0	68,350	5,000	33,025	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Navotas	0	0	0	0	0	0	0	0	34,900	1,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Valenzuela	13,050	0	3,500	16,210	1,600	31,000	0	7,500	796,744	44,525	560,410	1,000	10,000	0	0	0	0	0	0	0	0	0	0	0	8,500
Las Pinas	0	0	0	0	0	0	0	0	1,700	0	57,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nakati	0	0	0	0	0	0	0	1,400	60,320	21,100	146,550	12,000	0	0	0	0	0	0	0	0	0	0	0	0	0
Muntinlupa	0	0	0	0	0	9,050	0	0	67,525	0	198,000	0	1,500	0	0	0	0	0	0	0	0	0	0	0	0
Paranaque	0	0	11,500	0	0	10,000	0	0	43,325	6,818	156,500	4,900	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasay City	0	0	0	0	0	0	0	0	1,476	0	58,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tayug	0	0	0	0	0	0	0	0	1,700	0	67,500	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH HARBOR	0	0	12,000	0	0	0	0	0	30,005	2,000	28,500	20,000	0	0	0	0	0	0	0	0	0	0	0	0	0
NICT	0	0	0	0	0	0	0	20,000	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH HARBOR	0	0	0	0	0	0	0	0	0	0	0	22,000	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	77,050	4,210	62,325	142,935	80,000	304,900	26,875	453,000	3,300,000	464,070	5,753,752	127,100	55,375	193,750	51,075	212,340	2,800	12,500	179,825	273,470	4,925	2,326	13,500	0	

0502	0503	1391	1302	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1417	3010	3020	3030	GRAND TOTAL
Canarines N	Canarines S	Abra	Benguet	Manila	Mandaluyong	Marikina	Pasig	Quezon City	San Juan	Caloocan Ci	Malabon	Navotas	Valenzuela	Las Pinas	Nakati	Muntinlupa	Paranaque	Pasay City	Taguig	NORTH HARBO	HICT	SOUTH HARBO	
0	0	0	0	0	0	0	0	7,740	0	0	0	6,750	11,000	0	0	0	0	0	12,000	0	0	0	37,490
0	0	0	0	0	0	0	0	12,000	0	2,000	0	0	0	0	0	0	0	11,000	0	0	0	0	25,000
0	0	0	0	37,500	0	0	8,000	23,000	0	46,000	6,713	0	12,000	0	6,750	0	0	0	0	0	0	0	139,963
0	0	0	0	150,000	21,000	5,000	30,000	119,500	0	41,104	17,500	600	65,350	0	6,475	0	2,300	12,946	2,600	2,400	0	0	500,375
0	0	0	0	31,000	0	0	0	30,000	0	5,500	2,750	0	0	0	0	0	0	0	0	0	0	12,000	81,250
0	0	0	0	70,950	3,000	0	10,000	10,000	0	28,500	0	0	55,813	0	0	0	21,875	0	0	12,000	0	0	255,638
0	0	0	0	8,800	15,000	0	12,000	15,000	0	0	0	0	12,000	0	0	0	0	0	0	0	0	0	62,800
0	0	0	0	109,750	0	0	0	18,040	0	4,250	18,000	0	65,300	0	0	0	0	0	16,125	0	26,000	426,275	707,740
2,625	0	0	0	350,203	28,418	11,558	139,304	408,257	2,800	116,053	26,905	13,250	491,838	4,630	36,368	4,400	7,500	0	875	182,600	0	419,000	2,692,772
0	0	0	0	119,475	21,000	0	46,750	66,550	17,501	14,100	12,084	3,400	35,890	0	0	0	0	0	0	0	0	40,000	432,000
2,300	2,326	0	0	343,335	29,650	18,000	136,310	278,415	0	40,813	25,592	6,000	215,296	0	58,000	41,500	17,450	23,006	61,910	74,710	18,000	18,000	1,136,488
0	0	0	0	124,100	12,000	13,500	22,910	61,475	5,750	31,800	3,000	1,200	50,600	0	0	0	750	0	2,000	6,750	21,000	0	427,335
0	0	0	0	14,700	6,155	0	8,180	18,900	0	8,420	0	2,000	20,250	0	0	0	0	0	0	5,000	0	11,000	122,455
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	316,700
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	960,880
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	501,185
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,000
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56,850
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	898,818
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,500
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,000
0	0	0	0	0	0	0	0	0	0	0	0	0	3,500	0	0	0	0	0	0	0	0	0	3,500
0	0	0	0	0	0	0	0	0	4,750	9,300	10,000	0	1,876	0	0	0	0	0	0	0	0	1,000	69,926
0	0	0	0	0	0	0	0	12,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,000
0	0	0	0	12,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,000
0	0	0	16,233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,186,093
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	168,052
0	0	0	2,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	185,280
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	563,786
0	0	10,000	10,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	536,137
0	0	0	1,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84,795
0	0	0	6,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	537,881
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	131,435
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,150
0	0	8,500	13,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,512,439
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62,150
0	0	0	1,900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	249,563
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	273,075
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	241,543
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60,726
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90,773
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	158,995
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27,500
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,400
4,925	2,326	13,500	56,683	1,371,813	136,223	48,058	413,454	1,080,877	36,801	376,840	122,599	33,200	1,040,713	4,030	107,593	45,200	49,875	46,352	95,510	283,460	65,000	927,275	16,426,438

FORM 3 COMPANY SURVEY FORM

COMPANY NAME: _____ ADDRESS: _____
 INTERVIEWER: _____ SUPERVISOR: _____ DATE: _____

1. CHARACTERISTICS OF GOODS HANDLED:

LN #	MAIN GOODS TRANSPORTED	AVERAGE VOLUME PER YEAR 1/	FREQUENCY OF SHIPMENT PER YEAR 1/	PACKING TYPE		ORIGIN/ DESTINATION 2/ (IF VIA ANY PORT, PLEASE INDICATE PORT NAME)	IF Along Pasig River 3/	USUAL TIME OF DEPARTURE	MODE USED
				CONTAINER [SIZE]	NON-CONTAINER				
1						From: To:			
2						From: To:			
3						From: To:			
4						From: To:			
5						From: To:			
6						From: To:			
7						From: To:			
8						From: To:			
9						From: To:			
10						From: To:			

1/ FOR THE PERIOD OCT. 1992-SEPT. 1993 ONLY.
 2/ IF DIFFERENT ORIGIN/DESTINATION FOR THE SAME PRODUCT, PLEASE USE NEXT LINE NUMBER.
 3/ IF ALONG PASIG RIVER, PLEASE MARK WITH LETTER Y.

Container	Non-Container
1 - Dry	1 - Van/Pick-Up
2 - Flat	2 - Jeepney
3 - Other (Specify)	3 - Light Cargo
4 - 20 feet	4 - Truck 3 Axis
5 - 40 feet	5 - Other (Specify)
6 - 45 feet	6 - Dump Truck
7 - Other (Specify)	7 - Trailer
	8 - Tank/Tray
	9 - Cargo
	10 - Cargo/Passal
	11 - Other (Specify)

Appendix B-15(2)

Ln #	MARKS, GOODS TRANSPORTED	AVERAGE VOLUME PER YEAR 1/		FREQUENCY OF SHIPMENT PER YEAR 1/	PACKING TYPE		ORIGIN/ DESTINATION 2/ (IF VIA ANY PORT, PLEASE INDICATE PORT NAME)		If Along Pasig River 3/	USUAL TIME OF DEPARTURE	MODE USED
		QUANTITY	UNIT		CONTAINER (SIZE)	NON-CONTAINER	From:	To:			
1								From:			
								To:			
2								From:			
								To:			
3								From:			
								To:			
4								From:			
								To:			
5								From:			
								To:			
6								From:			
								To:			
7								From:			
								To:			
8								From:			
								To:			
9								From:			
								To:			
10								From:			
								To:			
11								From:			
								To:			
12								From:			
								To:			
13								From:			
								To:			

1/ FOR THE PERIOD OCT, 1982-SEPT, 1983 ONLY.

2/ IF DIFFERENT ORIGIN/DESTINATION FOR THE SAME PRODUCT, PLEASE USE NEXT LINE NUMBER.

3/ IF ALONG PASIG RIVER, PLEASE MARK WITH LETTER Y.

- Container
- 1 - Dry
 - 2 - Reefer
 - 3 - Other (Specify Size)
 - 4 - 20 feet
 - 5 - 40 feet
 - 6 - Others (Specify)
- Non-Container
- 1 - Pallet
 - 2 - Bag
 - 3 - Carton
 - 4 - Case
 - 5 - Drum
 - 6 - Bulk
 - 7 - Others (Specify)

- Mode Used
- 1 - Van/Truck-Up
 - 2 - Jeepney
 - 3 - Light Cargo
 - 4 - Truck 2 Axle
 - 5 - Truck 3 Axle
 - 6 - Dump Truck
 - 7 - Trailer
 - 8 - Tank/Lorry
 - 9 - Barge
 - 10 - Tanker/Vessel
 - 11 - Others (Specify)

Appendix B-15 (3)

2. ASSESSMENT OF GOODS TRANSPORTATION:

	ASSESSMENT (P/s. check)		REASON FOR THE ASSESSMENT GIVEN	RANK 3 ITEMS WHERE IMPROVEMENT IS CRITICAL
	SERIOUS PROBLEM	POSES A NOT A PROBLEM		
1. CARGO HANDLING AT PORT				
1) Handling Time				
2) Handling Method				
3) Handling Charge				
4) Cargo Loading/Unloading To/From Land Transport				
5) Customs Clearance				
6) Storage at Port				
2. TRANSPORT IN THE HINTERLAND				
1) Traffic Congestion				
2) Road Facilities (pavement, bridge, width, etc.)				
3) Truck Ban				
3. OTHER CONCERNS YOU MAY WANT TO ADD				
1)				
2)				
3)				
4)				

Appendix B-15(4)

3. IF BATANGAS PORT WILL HAVE THE SAME FUNCTION AS THE MANILA INTERNATIONAL CONTAINER TERMINAL (MICT), WILL YOU USE IT ?

- 1) YES, TOTALLY
- 2) YES, PARTLY
- 3) NO

IF YES, PLEASE STATE YOUR REASONS:

4. IF SUBIC WILL HAVE THE SAME FUNCTION AS THE MANILA INTERNATIONAL CONTAINER TERMINAL (MICT), WILL YOU USE IT ?

- 1) YES, TOTALLY
- 2) YES, PARTLY
- 3) NO

IF YES, PLEASE STATE YOUR REASONS:

5. WHICH DO YOU THINK IS BETTER ?

- 1) IMPROVEMENT OF THE EXISTING MANILA PORTS
- 2) IMPROVEMENT OF BATANGAS PORT
- 3) IMPROVEMENT OF SUBIC PORT
- 4) CONSTRUCTION OF A NEW PORT OUTSIDE METRO MANILA

6. DO YOU OWN / RENT A WAREHOUSE, SILO, STOCKYARD OR CONTAINER YARD ALONG THE PASIG RIVER ?

- 1) YES
- 2) NO

Appendix B-16

List of Companies and Corporations Sampled

Seq.	NAME OF COMPANY	Seq.	NAME OF COMPANY
1	ABBOT LABORATORIES	61	PHIL. NATIONAL OIL CO.
2	ACE FOODS INC.	62	PILIPINAS HINO INC.
3	ACLEM PAPER MILLS INC	63	PILIPINAS SHELL PETROLEUM CORP.
4	ALASKA TRADING CO. INC.	64	PUREFOODS CORP.
5	ALLEGRO MICROSYSTEMS PHILS. INC.	65	REPUBLIC GLASS CORP.
6	AMON TRADING	66	RFM CORPORATION
7	ARIES (PHILS.) INC.	67	RIZAL CEMENT CO., INC.
8	ASEA BROWN BOVERI INC.	68	ROCHE (PHILS.), INC.
9	ASIA BREWERY	69	SAN MIGUEL CORP.
10	ASIA COAL CORPORATION	70	SAN MIGUEL FOODS INC.
11	ASIAN CHEMICAL CORP.	71	SHELL GAS EASTERN, INC.
12	ASIAN TRANSMISSION CORP.	72	SHOEMART INC.
13	ASTRA PHARMACEUTICALS PHILS., INC.	73	SIME DARBY PILIPINAS INC.
14	ATLAS FERTILIZER CORP.	74	SOLID CEMENT CORPORATION
15	ATLAS PUBLISHING CO., INC.	75	TEXAS INSTRUMENTS
16	BACNOTAN CONSOLIDATED INDUSTRIES INC.	76	THREE M PHILS., INC.
17	BATAAN PULP & PAPER MILLS INC.	77	TOYOTA MOTORS PHILS., CORP.
18	BAYERS PHILS., INC.	78	UNION AJINOMOTO
19	BORMACHECO, INC.	79	VITARICH
20	BRISTOL MYERS SQUIBB (PHILS.) INC.	80	ABOITIZ SHIPPING CORP.
21	CALIFORNIA MANUFACTURING CO., INC.	81	ALLIED SEALAND CORP
22	CALTEX PHILS.	82	AMERICAN PRESIDENT LINES
23	CHEMPHIL LMG, INC.	83	ARCHIPELAGO LINES, INC.
24	CIBA -- GEIGY PHILS., CORP.	84	ASUNCION SHIPPING LINES INC.
25	COCA -- COLA BOTTLERS	85	A.P. MADRIGAL STEAMSHIP CO., INC.
26	COLGATE-- PALMOLIVE PHILS., INC.	86	BATANGAS BAY CARRIERS INC
27	CONCEPCION INDUSTRIES, INC.	87	CENTRAL SHIPPING CO., INC.
28	CONNELL BROS., CO., PILIPINAS, INC.	88	CENTURY CONTAINER CORP.
29	DEL MONTE PHILS.	89	COASTAL CARRIERS
30	DUTCH BOY PHILS., INC.	90	COASTWISE LIGHTERAGE
31	EVEREADY BATTERY	91	CONBROS SHIPPING CORP.
32	FUJITSU TEN CORP. OF THE PHILS.	92	COSCO
33	GENERAL MILLING CORP.	93	C.B. NAZAL TRADING
34	GENERAL TEXTILES INC.	94	DELSAN TRANSPORT LINES, INC.
35	GEN. FOODS PHILS. INC	95	DOLMAN TRANSPORT CORP.
36	HI CEMENT CORP.	96	ESCANO LINES INC.
37	HI--CEMENT CORPORATION	97	DON TIM SHIPPING (Evergreen)
38	HOECHST PHILS. INC.	98	FIRST AQUA SHIPPING
39	JACINTO IRON & STEEL SHEETS CORP.	99	GEORGE & PETER LINES, INC.
40	JOHNSON & JOHNSON (PHILS.) INC.	100	ISLA NEGROS MARITIME, INC.
41	KIMBERLY CLARK PHILS., INC.	101	ISLAND INTEGRATED OFFSHORE SERVICES INC.
42	LA TONDENA DISTILLERS INC	102	ISLAS TANKER CORP.
43	LINTON COMMERCIAL CO., INC	103	K LINES
44	MAGNOLIA CORP.	104	LA FELICIDAD MARINE CORP.
45	MANILA ELECTRIC CO.	105	LORENZO SHIPPING CORP.
46	MANILA PAPER MILLS	106	MAERSK FILIPINAS INC.
47	MAXON SYSTEMS PHIL. INC.	107	METROPOLITAN SHIPPING CO. INC.
48	MERCURY DRUG CORP.	108	MITSUI O.S.K. LINES (Mitsui O.S.K. Lines)
49	MOBIL PHILS., INC.	109	NYK FIL-- JAPAN SHIPPING CORP.
50	MONTEREY FARMS CORP.	110	PETROLINE CARRIERS INC
51	NAPOCOR	111	PEXCOR SHIPPING CO., INC.
52	NATIONAL FOOD AUTHORITY	112	PNOC SHIPPING & TRANSPORT CORP
53	NATIONAL STEEL CORP.	113	PRINCE VALIANT
54	NESTLE PHILS., INC.	114	SEA--LAND SERVICE
55	PEPSI-- COLA PRODUCTS PHILS., INC.	115	SOLID SHIPPING LINES, INC.
56	PETRON CORP.	116	TRANS--ASIA SHIPPING LINES, INC.
57	PFIZER, INC.	117	TRILINES SHIPPING INC.
58	PHILIPPINE DAIRY PRODUCTS CORP.	118	UNITED TANKER CORP.
59	PHILIPPINE REFINING CO.	119	VIA MARINE CORP
60	PHIL. AUTOMOTIVE MFG. CORP.	120	VLASONS SHIPPING, INC.

Appendix B-17(1)

Reasons Given for the Assessment of "Serious Problem" and "Poses a Problem" in Goods Transportation by Top Corporations

1. CARGO HANDLING AT PORT

1.1 Handling Time

- a) Long handling time causes a problem since stocks are refrigerated and power problem might occur.
- b) Long processing leadtime of documents.
- c) Problem in locating cargoes.
- d) Time is very important to manufacturers since we have to meet and follow certain production plan.
- e) Too long.
- f) Congestion.
- g) Takes too long because of poor layout of facilities.
- h) Poses a problem due to lack of equipment.
- i) Lacks manpower.
- j) PPA lacks forklifts to entertain all shippers. Departing vessels are prioritized on forklift usage and some handlers are bribed to facilitate handling of goods from arriving vessels.
- k) Affects delivery time.
- l) Late arrival of cargoes.
- m) Lack of handling equipment causes delay in clearing.
- n) Limited berthing space. Vessels usually incur time lost in waiting for a berth.
- o) Discharge rate is low.

1.2 Handling Method

- a) Frequent unlocated shipments.
- b) Needs more efficient personnel.
- c) Pilferage and damages.
- d) Lack of equipment/antiquated.
- e) Obsolete/inadequate facilities.
- f) Poses serious problem since stock are fragile and perishable.
- g) Serious problem because of use of hooks.
- h) Additional equipment is needed.
- i) It takes one day to strip one container.
- j) Affects quality of goods.
- k) Should be looked into because we have breakable and perishable cargoes.
- l) Lack of handling equipment causes delay in clearing.
- m) Insufficient grabbing equipment and inefficient stevedores.
- n) No specialized handling equipment to unload bulk cargo.

Appendix B-17(2)

1.3 Handling Charge

- a) Just give standard charges to all ports.
- b) Not uniform.
- c) Not commensurate to service.
- d) Becoming expensive.
- e) Poses a problem because of stand by charges.
- f) Affects transport cost.
- g) Charges should at least be competitive.
- h) Arbitrarily high compared to other countries.

1.4 Cargo Loading/Unloading To/From Land Transport

- a) Longer leadtime to unload cargo or break bulk shipment.
- b) Lack of equipment.
- c) Limited turnaround, waiting time is too long.
- d) Congestion.
- e) Nature of products require special handling which is not normally afforded the cargo.
- f) Pier congestion.
- g) There is congestion at the port because of vehicles and pedestrians roaming the area.
- h) Affects delivery leadtime/customer service.
- i) Delay in loading/unloading.
- j) Old equipment is being used.

1.5 Customs Clearance

- a) Lack of customs signatories.
- b) Problem with dumping.
- c) Importers/brokers should make extra effort and time in releasing, especially if these are incoming shipments schedule by BOC.
- d) Goods need to be released in simplified way.
- e) "Red tape"/need computerization.
- f) "Red tape" is widespread.
- g) Delays due to SGS must be addressed.
- h) Too many requirements.
- i) Processing of documents too slow.

1.6 Storage At Port

- a) Cargo is often exposed to elements.
- b) Problem with dumping.
- c) Importers/brokers should make extra effort and time in releasing, especially if these are incoming shipments schedule by BOC.
- d) Delayed stripping of LCL cargoes.
- e) Limited.
- f) Congestion.
- g) Pilferage is still a possibility.

Appendix B-17(3)

- h) Time allowed is too short, congested.
- i) Leadtime problem.
- j) Serious problem because pier is being used as container yard.
- k) Storage must start within ten days after vessel's departure to complete necessary documents for filing entry.
- l) Limited spaces for unloading activities of bulk cargoes.
- m) Practically no storage for bulk.

2. TRANSPORT IN THE HINTERLAND

2.1 Traffic Congestion

- a) Longer leadtime causes high inventory cost.
- b) Frequent traffic problems.
- c) Affect the availability of our equipment.
- d) Delay in the delivery of shipments to consignees will mean delay in production.
- e) Too heavy within Metro Manila.
- f) Causes delay on pick-up time.
- g) Causes delay on delivery.
- h) Becoming a problem due to the increasing number of cars, jeepney, and buses.
- i) Causes delay in unloading.
- j) Pier is the most traffic congested area.

2.2 Road Facilities

- a) Lack of infrastructure improvement.
- b) Bridges are not suitable with our heavy cargoes like power transformer.
- c) Unmaintained roads and bridges.
- d) State of disrepair causes damages.
- e) The present State of road facilities poses a problem since truck maintenance cost is increasing.
- f) Road widening or alternate route must be improved and developed.
- g) Affect traffic flow and delivery leadtime.
- h) Roads should be concretized.
- i) Weight limits for some bridges.
- j) Road conditions are very bad affecting the no. of trips and increasing maintenance cost of haulers.
- k) Poorly maintained.

2.3 Truck Ban

- a) Longer delivery leadtime.
- b) Pending cargoes/extra cost in trucking/delays in time scheduling and planning.
- c) Delays in the delivery of shipments to consignees will mean delay in production.
- d) Should be shortened to be able to transport more goods.
- e) Limits delivery schedule.
- f) Unclear regulations and corruption.
- g) Causes delay in unloading.
- h) Becomes a problem when goods are badly needed.

Appendix B-17(4)

- i) Affects customer service/leadtime.
- j) Truck ban must be abolished.
- k) Truck ban is quite long.
- l) Limits the number of trips.
- m) Night delivery only is possible.
- n) Limited throughput.

3. OTHERS

- a) There should be a route specially for heavy trucks, cargoes, and other delivery vans for industrial purposes only just like what's being done by the Singapore Gov't. where they have routes for manufacturers and industrial concern (for productivity and profit concerns).
- b) There is a problem with the consolidator since it takes 1-2 weeks to perform stripping.
- c) There is a problem with traffic enforcers because of unreasonable apprehensions. Improvement is critical.
- d) Hijacking poses a problem due to lax governmental police enforcement. Improvement is critical.
- e) Storage of goods outside warehouses of shippers, along the road which is under PPA jurisdiction, poses a problem.
- f) Traffic lights at busy intersection.
- g) Equipment breakdown. Improvement is critical.
- h) Slow turnaround of cargo shipment.
- i) Water depth is too shallow. Big vessels which command lower freight rate cannot be used.

Appendix B-18(1)

Reasons for the Assessment of "Serious Problem" and "Poses a Problem"
in Goods Transportation by Shipping Companies

1. CARGO HANDLING AT PORT

1.1 Handling Time

- a) It takes 5-7 days to finish loading & unloading.
- b) Lack of adequate arrastre handling equipment.
- c) Slow.

1.2 Handling Method

- a) Possibility of product contaminations.
- b) Obsolete equipment.
- c) Lack of adequate arrastre handling equipment.
- d) Poses a problem when equipment break down in loading and unloading cargoes.

1.3 Handling Charge

- a) Resorting to product grading down.
- b) Very high charges.
- c) Extra costs to exporters making them uncompetitive.

1.4 Cargo Loading/Unloading To/From Land Transportation

- a) During unloading, difficulty comes in with respect to kind of depot.
- b) Not enough equipments.
- d) Lack of adequate arrastre handling equipment.
- e) Congested area, inadequate equipment facilities.
- f) Inadequate marshalling yard.

1.5 Customs Clearance

- a) "Red tape" exists, corrupt officers in the organization.

1.6 Storage At Port

- a) No storage facilities
- b) Pilferages/losses
- c) Discourages exporters to enter goods when warehouses are full.

2. TRANSPORT IN THE HINTERLAND

2.1 Traffic Congestion

- a) Our road network and bridges are antiquated to say the least and this greatly affect goods movement.
- b) Slow down transport activities.
- c) If you are handling large number of equipment and materials, it will give you extra days in transporting due to longer travel time.

2.2 Road Facilities

- a) Shipping lines equipment are getting bigger and modern and our infrastructure simply could not accommodate these.
- b) The present condition of road facilities slow down transport activities.
- c) Posses a problem when passing through narrow roads and roads need to be cemented.
- d) Route is not systematically planned.
- e) No good maintenance program.

2.3 Truck Ban

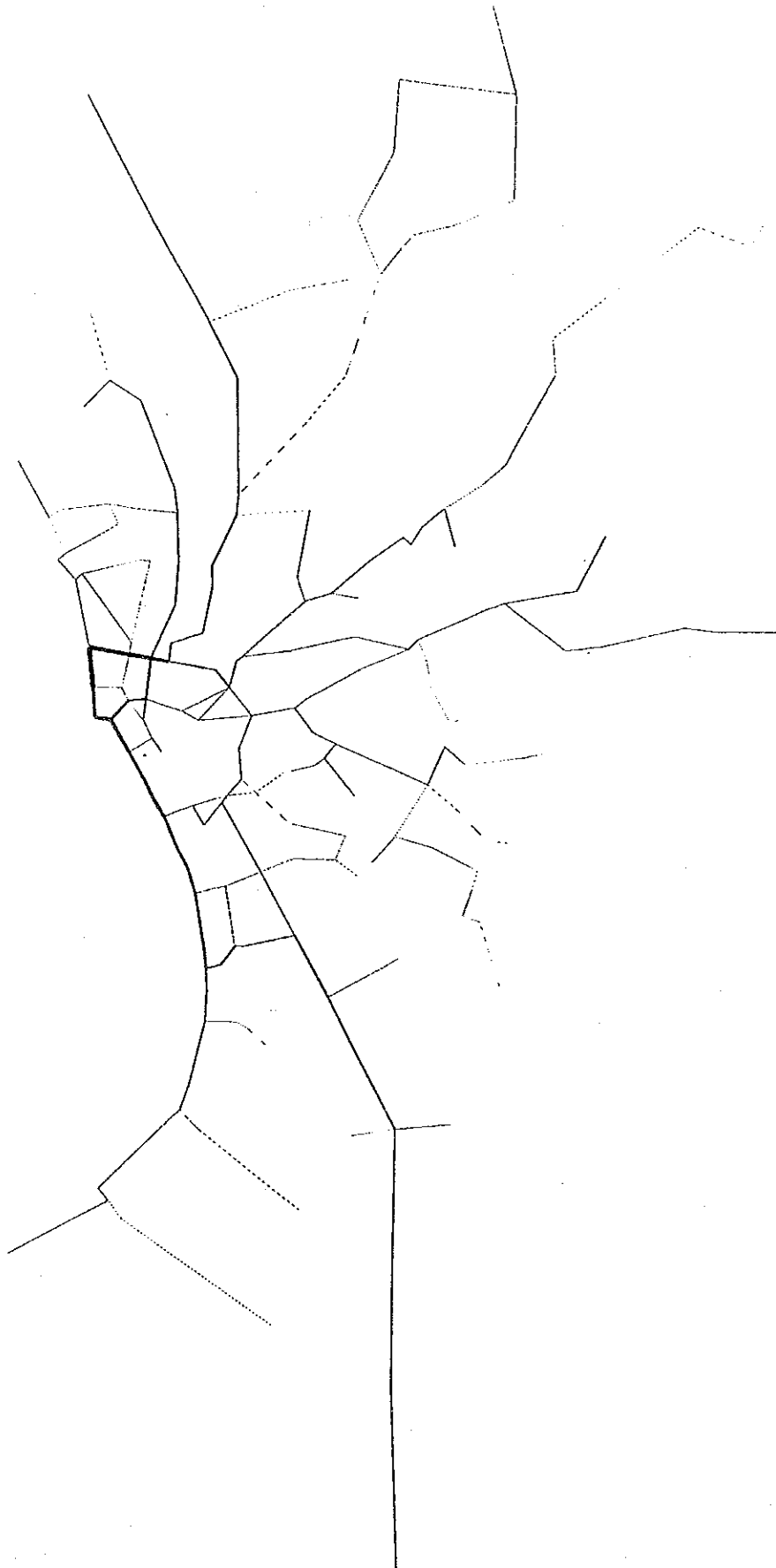
- a) This ban help improve traffic at certain hours of the day but greatly hinders cargo truck movements.
- b) Sometimes does not jive with LCT of shipping lines.
- c) Slows down transport activities.
- d) It makes our operations (specially coal) slower due to unavailability of trucks.
- e) Truck ban is too early. It should be from 7:00 p.m. to 5:00 a.m.
- f) Limits the utilization of equipment.

3. Others

- a) Handling equipment and trucks need to be standardized and should be with safety features.
- b) Operator/driver should pass psychological/drug addiction test, education/physical capacities checked.
- c) Siltation of piers and shallow quays in Manila.
- d) Congestion at North Harbor.
- e) Lack of passenger terminal.
- f) Inadequate public utility vehicles.

Appendix B-19 PCU from/to port

No	Name	Truck 2-ax	Truck 3-ax	Trailer	Others	Total
1	Divisoria (Manila)	88	735	1383	103	2309
2	Tondo (Manila)	38	441	707	120	1306
3	Binondo (Manila)	42	147	280	232	701
4	San Lazaro (Manila)	14	144	120	54	332
5	Del Pan (Manila)	84	228	642	450	1404
6	Quiapo (Manila)	40	21	75	55	191
7	Sta. Cruz (Manila)	20	138	60	3	221
8	Sampaloc West (Manila)	12	9	66	22	109
9	Sampaloc East (Manila)	24	6	93	2	125
10	Paco (Manila)	30	51	210	36	327
11	Ermita (Manila)	58	174	1463	531	2226
12	Malate (Manila)	4	6	63	35	108
13	Sta. Clara (Pasay)	6	6	39	-	51
14	San Rafael (Pasay)	62	36	102	18	218
15	NINA (Pasay)	-	-	66	9	75
17	Palanan (Makati)	6	-	105	57	168
18	Poblacion (Makati)	4	6	72	63	145
19	Center (Makati)	36	114	291	78	519
21	Saniga (Mandaluyong)	26	45	264	285	620
22	Barangka (Mandaluyong)	-	-	24	72	96
23	Greenhills (San Juan)	-	-	-	6	6
24	Isabelita (San Juan)	8	-	108	45	161
25	S. Mesa Height (Quezon)	28	132	141	88	389
26	Philam (Quezon)	14	90	216	102	422
27	Diliman (Quezon)	8	12	24	32	76
28	Culiat (Quezon)	-	-	42	3	45
29	Novaliches (Quezon)	28	6	222	13	269
30	Bagbaguin (Quezon)	-	54	69	4	127
31	Project 8 (Quezon)	18	153	273	52	496
32	Camp Aguinaldo (Quezon)	-	6	-	5	11
33	Cubao (Quezon)	50	93	153	56	352
34	Tatalon (Quezon)	12	21	69	3	105
35	Mariana (Quezon)	-	12	111	16	139
36	Bagong Lipunan (Quezon)	6	9	9	29	53
37	Grace Park (Kaloocan)	24	42	676	65	807
38	Maypajo (Kaloocan)	4	36	84	61	185
39	Bagong Barrio (Kaloocan)	20	15	69	32	136
41	Camarin (Kaloocan)	-	-	54	-	54
42	Mapulang Lupa (Valenzuela)	34	63	114	3	214
43	Marulas (Valenzuela)	28	252	1050	65	1395
44	Pasolo (Valenzuela)	8	51	54	15	128
45	Tonsuya (Malabon)	14	30	225	19	288
46	Potrero (Malabon)	12	42	108	24	186
47	Longos (Malabon)	-	111	84	6	201
48	Daanghari (Navotas)	14	18	147	21	200
49	Bangkulasi (Navotas)	56	81	604	53	794
50	Marikina Height (Marikina)	10	6	162	27	205
51	Barangka (Marikina)	8	-	79	38	125
52	San Miguel (Pasig)	-	6	48	12	66
53	Mangahan (Pasig)	40	42	99	10	191
54	Capitolyo (Pasig)	18	30	438	6	492
55	Pateros (Pateros)	-	6	12	-	18
57	Bicutan (Taguig)	6	30	717	7	760
58	Ligid Tipas (Taguig)	6	24	96	27	153
59	Ft Bonifacio (Taguig)	8	189	273	59	529
60	La Huerta (Paranaque)	22	6	138	150	316
61	Merville (Paranaque)	22	6	325	92	445
62	Baclaran (Paranaque)	8	-	34	15	57
63	Sucat (Muntinlupa)	22	-	108	28	158
64	Alabang (Muntinlupa)	14	120	231	56	421
65	Aldana (Las Pinas)	12	12	129	49	202
66	Almanza (Las Pinas)	-	9	-	-	9
67	Meycauyan (Outside)	108	306	690	67	1171
68	San Jose del M (Outside)	-	-	21	-	21
69	Montalban (Outside)	-	-	12	-	12
70	East (Outside)	14	267	449	135	865
71	Batangas (Outside)	16	165	1371	176	1728
72	Cavite (Outside)	42	33	387	31	493
Total		1356	4893	16650	4028	26927



Appendix B-20 Volume from/to Port in 1990