

Table 9-4-12(2)A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (With) (Route 3-1-1)

Year	(E) Operation Cost				(C) Maintenance Cost				Total O/M Cost Amount (Rp. Million)	
	(1 round trip (x2))		(2 round trip (x4))		C Type Boat		Total Maintenance Cost			
	C Type Boats Total Tonnage	Cost Amount (Rp. Million)	C Type Boats Total Tonnage	Cost Amount (Rp. Million)	Total of Proc. Cost (Rp. Million)	Total Accumulated Proc. Cost (Rp. Million)	Total Maintenance Cost Amount (Rp. Million)	3%		
1998	300	35	0	0	0	35	1,815	1,815	54	89
1999	300	35	0	0	0	35	1,815	1,815	54	89
2000	300	35	0	0	0	35	1,815	1,815	54	89
2001	300	35	0	0	0	35	1,815	1,815	54	89
2002	300	35	0	0	0	35	1,815	1,815	54	89
2003	300	35	0	0	0	35	1,815	1,815	54	89
2004	300	35	0	0	0	35	1,815	1,815	54	89
2005	300	35	0	0	0	35	1,815	1,815	54	89
2006	300	35	0	0	0	35	1,815	1,815	54	89
2007	300	35	0	0	0	35	1,815	1,815	54	89
2008	0	0	300	71	0	71	1,815	1,815	54	125
2009	0	0	300	71	0	71	1,815	1,815	54	125
2010	0	0	300	71	0	71	1,815	1,815	54	125
2011	0	0	300	71	0	71	1,815	1,815	54	125
2012	0	0	300	71	0	71	1,815	1,815	54	125
2013	0	0	300	71	0	71	1,815	1,815	54	125
2014	0	0	300	71	0	71	1,815	1,815	54	125
2015	0	0	300	71	0	71	1,815	1,815	54	125
2016	0	0	300	71	0	71	1,815	1,815	54	125
2017	0	0	300	71	0	71	1,815	1,815	54	125
2018	0	0	300	71	0	71	1,815	1,815	54	125
2019	0	0	300	71	0	71	1,815	1,815	54	125
2020	0	0	300	71	0	71	1,815	1,815	54	125
2021	0	0	300	71	0	71	1,815	1,815	54	125
2022	0	0	300	71	0	71	1,815	1,815	54	125
2023	0	0	300	71	0	71	1,815	1,815	54	125
2024	0	0	300	71	0	71	1,815	1,815	54	125
2025	0	0	300	71	0	71	1,815	1,815	54	125
2026	0	0	300	71	0	71	1,815	1,815	54	125
2027	0	0	300	71	0	71	1,815	1,815	54	125

Table 9-4-13A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (Without) (Route 3-1-1)

Year	Number	Tonnage (LCM Type) (Unit)	Assumed Life Time of LCM for Route 3 = 15 Years	Unit Procurement Cost of Boats per ton = 6.05 Rp. Million /ton	Unit Operation Cost per ton/mile (Rp.)	Distance : 12.8 (Rp. million) / 14 (miles)	(A) Substitution Cost of Boats (LCM Type)		(B) Operation Cost		(C) Maintenance Cost		Total O/H Cost Amount (Rp. Million)	Year
							Substitution Cost	Accumulated Cost	LCM Type Boat Tonnage	Op. Cost Amount (Rp. Million)	Substituted LCM Type Accumulated Proc. Cost	Total Maintenance Cost Amount (Rp. Million)		
1 1998	1	300	0	300	1,815	1,815	0	1,815	300	71	1,815	54	125 1998	
2 1999	0	300	0	300	1,815	0	1,815	0	300	71	1,815	54	125 1999	
3 2000	0	300	0	300	1,815	0	1,815	0	300	71	1,815	54	125 2000	
4 2001	0	300	0	300	1,815	0	1,815	0	300	71	1,815	54	125 2001	
5 2002	0	300	0	300	1,815	0	1,815	0	300	71	1,815	54	125 2002	
6 2003	0	300	0	300	1,815	0	1,815	0	300	71	1,815	54	125 2003	
7 2004	0	300	0	300	1,815	0	1,815	0	300	71	1,815	54	125 2004	
8 2005	0	300	0	300	1,815	0	1,815	0	300	71	1,815	54	125 2005	
9 2006	0	300	0	300	1,815	0	1,815	0	300	71	1,815	54	125 2006	
10 2007	0	300	0	300	1,815	0	1,815	0	300	71	1,815	54	125 2007	
11 2008	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2008	
12 2009	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2009	
13 2010	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2010	
14 2011	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2011	
15 2012	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2012	
16 2013	0	300	0	300	1,815	1,815	1,815	1,815	300	141	1,815	54	185 2013	
17 2014	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2014	
18 2015	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2015	
19 2016	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2016	
20 2017	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2017	
21 2018	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2018	
22 2019	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2019	
23 2020	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2020	
24 2021	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2021	
25 2022	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2022	
26 2023	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2023	
27 2024	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2024	
28 2025	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2025	
29 2026	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2026	
30 2027	0	300	0	300	1,815	0	1,815	0	300	141	1,815	54	185 2027	

Table 9-4-14(1)A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (With) (Route 3-1-2)

Ferry Boats		Assumption:		Unit Procurement Cost of Boats per ton *		6.05 Rp. Million /ton		Year		
New Boats		300 Ton per Boat		(A) Procurement Cost of New Boats						
Year	Procurement	Total Number of Boats	Accumulated Tonnage	(b) C Type Boat ( 2 R.T.)		(a) C Type Boat		Procurement Cost	Accumulated Cost	Year
				Procurement	Total Number of Boats	Procurement Cost	Accumulated Cost			
1	1	1	300	0	0	1,815	1,815	1,815	1,815	1998
2	1	1	300	0	0	0	1,815	0	1,815	1999
3	1	1	300	0	0	0	1,815	0	1,815	2000
4	1	1	300	0	0	0	1,815	0	1,815	2001
5	1	1	300	0	0	0	1,815	0	1,815	2002
6	1	1	300	0	0	0	1,815	0	1,815	2003
7	1	1	300	0	0	0	1,815	0	1,815	2004
8	1	1	300	0	0	0	1,815	0	1,815	2005
9	1	1	300	0	0	0	1,815	0	1,815	2006
10	1	1	300	0	0	0	1,815	0	1,815	2007
11	0	0	0	1	1	300	1,815	0	1,815	2008
12	0	0	0	1	1	300	1,815	0	1,815	2009
13	0	0	0	1	1	300	1,815	0	1,815	2010
14	0	0	0	1	1	300	1,815	0	1,815	2011
15	0	0	0	1	1	300	1,815	0	1,815	2012
16	0	0	0	1	1	300	1,815	0	1,815	2013
17	0	0	0	1	1	300	1,815	0	1,815	2014
18	0	0	0	1	1	300	1,815	0	1,815	2015
19	0	0	0	1	1	300	1,815	0	1,815	2016
20	0	0	0	1	1	300	1,815	0	1,815	2017
21	0	0	0	1	1	300	1,815	0	1,815	2018
22	0	0	0	1	1	300	1,815	0	1,815	2019
23	0	0	0	1	1	300	1,815	0	1,815	2020
24	0	0	0	1	1	300	1,815	0	1,815	2021
25	0	0	0	1	1	300	1,815	0	1,815	2022
26	0	0	0	1	1	300	1,815	0	1,815	2023
27	0	0	0	1	1	300	1,815	0	1,815	2024
28	0	0	0	1	1	300	1,815	0	1,815	2025
29	0	0	0	1	1	300	1,815	0	1,815	2026
30	0	0	0	1	1	300	1,815	0	1,815	2027

Table 9-4-14(2)A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (With) (Route 3-1-2)

Year	Unit Operation Cost per mile/ton (Rp.) :		12.8 (Rp. mile/ton/year)		17 (Rp. mile/ton/year)		3%		
	Distance :								
	Distance :								
(B) Operation Cost									
Year	(1 round trip (x2))		(2 round trip (x4))		C Type Boats Total		C Type Boat Total of Proc. Cost		Total O/M Cost Amount (Rp. Million)
	C Type Boats Total Tonnage	Cost Amount (Rp. Million)	C Type Boats Total Tonnage	Cost Amount (Rp. Million)	Total Op. Cost Amount (Rp. Million)	Total Proc. Cost (Rp. Million)	Total Accumulated Proc. Cost (Rp. Million)	Total Maintenance Cost Amount (Rp. Million)	
1998	300	43	0	0	43	1,815	1,815	54	97
1999	300	43	0	0	43	1,815	1,815	54	97
2000	300	43	0	0	43	1,815	1,815	54	97
2001	300	43	0	0	43	1,815	1,815	54	97
2002	300	43	0	0	43	1,815	1,815	54	97
2003	300	43	0	0	43	1,815	1,815	54	97
2004	300	43	0	0	43	1,815	1,815	54	97
2005	300	43	0	0	43	1,815	1,815	54	97
2006	300	43	0	0	43	1,815	1,815	54	97
2007	300	43	0	0	43	1,815	1,815	54	97
2008	0	0	300	86	86	1,815	1,815	54	140
2009	0	0	300	86	86	1,815	1,815	54	140
2010	0	0	300	86	86	1,815	1,815	54	140
2011	0	0	300	86	86	1,815	1,815	54	140
2012	0	0	300	86	86	1,815	1,815	54	140
2013	0	0	300	86	86	1,815	1,815	54	140
2014	0	0	300	86	86	1,815	1,815	54	140
2015	0	0	300	86	86	1,815	1,815	54	140
2016	0	0	300	86	86	1,815	1,815	54	140
2017	0	0	300	86	86	1,815	1,815	54	140
2018	0	0	300	86	86	1,815	1,815	54	140
2019	0	0	300	86	86	1,815	1,815	54	140
2020	0	0	300	86	86	1,815	1,815	54	140
2021	0	0	300	86	86	1,815	1,815	54	140
2022	0	0	300	86	86	1,815	1,815	54	140
2023	0	0	300	86	86	1,815	1,815	54	140
2024	0	0	300	86	86	1,815	1,815	54	140
2025	0	0	300	86	86	1,815	1,815	54	140
2026	0	0	300	86	86	1,815	1,815	54	140
2027	0	0	300	86	86	1,815	1,815	54	140

Table 9-4-15A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (Without) (Route 3-1-2)

Year	Ferry Boats		Assumption:		Unit Procurement Cost of Boats per ton *		Unit Operation Cost per million (Rp.) :		Total C/M Cost Amount (Rp. Million)	Year
	Number	Tonnage (LCM Type) (Unit)	Tonnage (LCM Type) (Unit)	Accumulated Tonnage (LCM Type)	Assumed Life Time of LCM for Route 3 = 15 Years	6.05 Rp. Million ton	Distance : 12.8 (Rp. million) 17 (miles) 2.0	Operation Cost Factor for LCM Type 3%		
				(A) Substitution Cost of Boats (LCM Type)		(B) Operation Cost		(C) Maintenance Cost		
				Substitution Cost	Accumulated Cost	LCM Type Boat Total Tonnage	Op. Cost Amount (Rp. Million)	Substituted LCM Type Accumulated Proc. Cost	Total Maintenance Cost Amount (Rp. Million)	
1	1988	1	300	0	0	300	86	1,815	54	140
2	1989	0	300	0	1,815	300	86	1,815	54	140
3	2000	0	300	0	1,815	300	86	1,815	54	140
4	2001	0	300	0	1,815	300	86	1,815	54	140
5	2002	0	300	0	1,815	300	86	1,815	54	140
6	2003	0	300	0	1,815	300	86	1,815	54	140
7	2004	0	300	0	1,815	300	86	1,815	54	140
8	2005	0	300	0	1,815	300	86	1,815	54	140
9	2006	0	300	0	1,815	300	86	1,815	54	140
10	2007	0	300	0	1,815	300	172	1,815	54	226
11	2008	0	300	0	1,815	300	172	1,815	54	226
12	2009	0	300	0	1,815	300	172	1,815	54	226
13	2010	0	300	0	1,815	300	172	1,815	54	226
14	2011	0	300	0	1,815	300	172	1,815	54	226
15	2012	0	300	0	1,815	300	172	1,815	54	226
16	2013	0	300	0	1,815	300	172	1,815	54	226
17	2014	0	300	0	1,815	300	172	1,815	54	226
18	2015	0	300	0	1,815	300	172	1,815	54	226
19	2016	0	300	0	1,815	300	172	1,815	54	226
20	2017	0	300	0	1,815	300	172	1,815	54	226
21	2018	0	300	0	1,815	300	172	1,815	54	226
22	2019	0	300	0	1,815	300	172	1,815	54	226
23	2020	0	300	0	1,815	300	172	1,815	54	226
24	2021	0	300	0	1,815	300	172	1,815	54	226
25	2022	0	300	0	1,815	300	172	1,815	54	226
26	2023	0	300	0	1,815	300	172	1,815	54	226
27	2024	0	300	0	1,815	300	172	1,815	54	226
28	2025	0	300	0	1,815	300	172	1,815	54	226
29	2026	0	300	0	1,815	300	172	1,815	54	226
30	2027	0	300	0	1,815	300	172	1,815	54	226

Table 9-4-16A Estimation of Time Cost Saving Benefits (Route 3-1-1)

		Assumption: Unit Time Cost per Passenger (hour) = 120 (Rp./hour)							
		(1) Time Cost for Without Case		(2) Time Cost for With Case				Time Cost Saving Benefits	
		(a) Passengers Larentuka - Terong		(a) Passengers Larentuka - Terong					
	Year	Passengers	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	Passengers	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	Time Saving	Year
			2.3			1.2		(Rp. Million)	
1	1998	61,699		17,029	61,699		8,895	8	1998
2	1999	66,116		18,248	66,116		9,521	9	1999
3	2000	70,849		19,554	70,849		10,202	9	2000
4	2001	75,631		20,874	75,631		10,891	10	2001
5	2002	80,735		22,283	80,735		11,626	11	2002
6	2003	86,184		23,787	86,184		12,410	11	2003
7	2004	92,001		25,392	92,001		13,248	12	2004
8	2005	98,211		27,106	98,211		14,142	13	2005
9	2006	104,580		28,864	104,580		15,060	14	2006
10	2007	111,362		30,796	111,362		16,036	15	2007
11	2008	118,584		32,729	118,584		17,076	16	2008
12	2009	126,275		34,852	126,275		18,184	17	2009
13	2010	134,465		37,112	134,465		19,363	18	2010
14	2011	143,186		39,519	143,186		20,619	19	2011
15	2012	152,472		42,082	152,472		21,956	20	2012
16	2013	162,362		44,812	162,362		23,380	21	2013
17	2014	172,892		47,718	172,892		24,896	23	2014
18	2015	184,107		50,814	184,107		26,511	24	2015
19	2016	196,048		54,109	196,048		28,231	26	2016
20	2017	208,765		57,619	208,765		30,062	28	2017
21	2018	222,307		61,357	222,307		32,012	29	2018
22	2019	236,400		65,246	236,400		34,042	31	2019
23	2020	236,400		65,246	236,400		34,042	31	2020
24	2021	236,400		65,246	236,400		34,042	31	2021
25	2022	236,400		65,246	236,400		34,042	31	2022
26	2023	236,400		65,246	236,400		34,042	31	2023
27	2024	236,400		65,246	236,400		34,042	31	2024
28	2025	236,400		65,246	236,400		34,042	31	2025
29	2026	236,400		65,246	236,400		34,042	31	2026
30	2027	236,400		65,246	236,400		34,042	31	2027

Table 9-4-17A Estimation of Time Cost Saving Benefits (Route 3-1-2)

Assumption: Unit Time Cost per Passenger (hour) = 120 (Rp./hour)

Year	(1) Time Cost for Without Case			(2) Time Cost for With Case			Time Cost Saving Benefits (Rp. Million)
	Passengers	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	Passengers	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	
1998	62,118	2.7	20,126	62,118	1.5	11,181	9
1999	66,564	2.7	21,567	66,564	1.5	11,982	10
2000	71,328	2.7	23,110	71,328	1.5	12,839	10
2001	76,141	2.7	24,670	76,141	1.5	13,705	11
2002	81,279	2.7	26,384	81,279	1.5	14,630	12
2003	86,764	2.7	28,112	86,764	1.5	15,618	12
2004	92,619	2.7	30,009	92,619	1.5	16,671	13
2005	98,870	2.7	32,034	98,870	1.5	17,797	14
2006	105,280	2.7	34,111	105,280	1.5	18,960	15
2007	112,107	2.7	36,323	112,107	1.5	20,179	16
2008	119,376	2.7	38,678	119,376	1.5	21,488	17
2009	127,117	2.7	41,186	127,117	1.5	22,881	18
2010	135,360	2.7	43,857	135,360	1.5	24,365	19
2011	144,138	2.7	46,701	144,138	1.5	25,945	21
2012	153,485	2.7	49,729	153,485	1.5	27,627	22
2013	163,438	2.7	52,954	163,438	1.5	29,419	24
2014	174,037	2.7	56,388	174,037	1.5	31,327	25
2015	185,324	2.7	60,045	185,324	1.5	33,358	27
2016	197,343	2.7	63,939	197,343	1.5	35,522	28
2017	210,141	2.7	68,086	210,141	1.5	37,825	30
2018	223,770	2.7	72,501	223,770	1.5	40,279	32
2019	236,400	2.7	76,594	236,400	1.5	42,552	34
2020	236,400	2.7	76,594	236,400	1.5	42,552	34
2021	236,400	2.7	76,594	236,400	1.5	42,552	34
2022	236,400	2.7	76,594	236,400	1.5	42,552	34
2023	236,400	2.7	76,594	236,400	1.5	42,552	34
2024	236,400	2.7	76,594	236,400	1.5	42,552	34
2025	236,400	2.7	76,594	236,400	1.5	42,552	34
2026	236,400	2.7	76,594	236,400	1.5	42,552	34
2027	236,400	2.7	76,594	236,400	1.5	42,552	34

Table 9-4-18A Estimation of Vehicle Loss Time Saving Benefits (Route 3-1-1)

Assumption: Unit Vehicle Time Cost (/hour) :		Truck		Sedan			
		5,640 (Rp./hour)		4,700			
Loss Time (Time Difference Without - Without)							
	Total	6.3	2.3	4.0			
	Without	1.2	1.2				
	With	5.1					
	Difference						
(2) Estimated Loss Time Cos (Rp. Million)							
Year	(1) Traffic Volume	Truck	Sedan	Truck	Sedan	Vehicle Loss Time Cost Saving Benefits (Rp. Million)	Year
1 1998	1,695	1,886	49	45	94	1998	
2 1999	1,836	2,048	53	49	102	1999	
3 2000	1,993	2,247	57	54	111	2000	
4 2001	2,154	2,457	62	59	121	2001	
5 2002	2,328	2,686	67	64	131	2002	
6 2003	2,516	2,936	72	70	142	2003	
7 2004	2,719	3,210	78	77	155	2004	
8 2005	2,939	3,509	85	84	169	2005	
9 2006	3,170	3,827	91	92	183	2006	
10 2007	3,420	4,173	98	100	198	2007	
11 2008	3,689	4,551	106	109	215	2008	
12 2009	3,979	4,963	114	119	233	2009	
13 2010	4,293	5,412	123	130	253	2010	
14 2011	4,630	5,902	133	141	274	2011	
15 2012	4,995	6,436	144	154	298	2012	
16 2013	5,388	7,018	155	168	323	2013	
17 2014	5,812	7,654	167	183	350	2014	
18 2015	6,269	8,347	180	200	380	2015	
19 2016	6,762	9,102	195	218	413	2016	
20 2017	7,259	9,926	209	238	447	2017	
21 2018	7,869	10,824	226	259	485	2018	
22 2019	8,283	11,518	238	276	514	2019	
23 2020	8,283	11,518	238	276	514	2020	
24 2021	8,283	11,518	238	276	514	2021	
25 2022	8,283	11,518	238	276	514	2022	
26 2023	8,283	11,518	238	276	514	2023	
27 2024	8,283	11,518	238	276	514	2024	
28 2025	8,283	11,518	238	276	514	2025	
29 2026	8,283	11,518	238	276	514	2026	
30 2027	8,283	11,518	238	276	514	2027	



Table 9-4-19A Estimation of Vehicle Loss Time Saving Benefits (Route 3-1-2)

Year	(1) Traffic Volume		(2) Estimated Loss Time Cos (Rp. Million)		Truck	Sedan	Truck	Sedan	Vehicle Loss Time Cost Saving Benefits (Rp. Million)	Year
	Truck	Sedan	Truck	Sedan						
1	1,622	1,879	48	46	94	1998				1998
2	1,748	2,062	51	50	101	1999				1999
3	1,883	2,263	55	55	110	2000				2000
4	2,022	2,473	59	60	119	2001				2001
5	2,172	2,704	64	66	130	2002				2002
6	2,334	2,956	68	72	140	2003				2003
7	2,507	3,231	74	79	153	2004				2004
8	2,693	3,533	79	86	165	2005				2005
9	2,887	3,852	85	94	179	2006				2006
10	3,096	4,201	91	103	194	2007				2007
11	3,320	4,581	97	112	209	2008				2008
12	3,560	4,996	104	122	226	2009				2009
13	3,817	5,448	112	133	245	2010				2010
14	4,093	5,941	120	145	265	2011				2011
15	4,390	6,479	129	158	287	2012				2012
16	4,708	7,065	138	173	311	2013				2013
17	5,049	7,704	148	188	336	2014				2014
18	5,416	8,402	159	205	364	2015				2015
19	5,809	9,162	170	224	394	2016				2016
20	6,231	9,991	183	244	427	2017				2017
21	6,683	10,896	196	266	462	2018				2018
22	7,181	12,565	222	307	529	2019				2019
23	7,581	12,565	222	307	529	2020				2020
24	7,581	12,565	222	307	529	2021				2021
25	7,581	12,565	222	307	529	2022				2022
26	7,581	12,565	222	307	529	2023				2023
27	7,581	12,565	222	307	529	2024				2024
28	7,581	12,565	222	307	529	2025				2025
29	7,581	12,565	222	307	529	2026				2026
30	7,581	12,565	222	307	529	2027				2027

Assumption: Unit Vehicle Time Cost (/hour):

Truck	5,640 (Rp./hour)
Sedan	4,700

Loss Time (Time Difference Without - With)		Hours By Sea Hours for Tide Waiting	
Total	6.7	2.7	4.0
Without			
With	1.5	1.5	
Difference	5.2		

Table 9-4-20A Economic Analysis for Route 3-1, Larantuka-Terong-Lewoleba Route

EIRR = 2.65%  
 NPV = -7,771 (Million Rp.)  
 B/C = 0.55 (Discount Rate Used = 10%)  
 (Unit: Rp. Million)

Year	Benefits				Costs				Year							
	(Users Benefits) Passengers Time Saving	Vehicle Loss Time Saving	(Invest. & O/M Costs Saving Benefit) (Without Costs) Terminal O/M Costs	Substituted Boats Procurement	Total Benefits	Total (With Costs)	Terminal Facilities	O/M Costs		Total	Ferry Boats Procurement	O/M Costs	Total	With Costs Total	Net Cash Flow	
1	1995				0	0	467		467			0	0	467	-467	1995
2	1996				0	0	7,211		7,211			0	0	7,211	-7,211	1996
3	1997				0	0	4,998		4,998			0	0	4,998	-4,998	1997
4	1998	17	188	0	3,630	265	4,100	138	3,962	3,630	186	3,816	3,954	146	1998	
5	1999	19	203	0	0	265	487	138	138	0	186	186	324	163	1999	
6	2000	19	221	0	0	265	505	138	138	0	186	186	324	181	2000	
7	2001	21	240	0	0	265	526	138	138	0	186	186	324	202	2001	
8	2002	23	261	0	0	265	549	138	138	0	186	186	324	225	2002	
9	2003	23	282	0	0	265	570	138	138	0	186	186	324	246	2003	
10	2004	25	308	0	0	265	598	138	138	0	186	186	324	274	2004	
11	2005	27	334	0	0	265	626	138	138	0	186	186	324	302	2005	
12	2006	29	362	0	0	265	656	138	138	0	186	186	324	332	2006	
13	2007	31	392	0	0	265	688	138	138	877	186	186	324	332	2006	
14	2008	33	424	0	0	421	878	151	151	1,015	186	186	1,201	-513	2007	
15	2009	35	459	0	0	421	915	151	151	0	265	265	416	462	2008	
16	2010	37	498	0	0	421	956	151	151	0	265	265	416	499	2008	
17	2011	40	539	0	0	421	1,000	151	151	0	265	265	416	540	2010	
18	2012	42	585	0	0	421	1,048	151	151	0	265	265	416	584	2011	
19	2013	45	634	0	3,630	421	4,730	151	151	0	265	265	416	632	2012	
20	2014	48	686	0	0	421	1,155	151	151	0	265	265	416	739	2014	
21	2015	51	744	0	0	421	1,216	151	151	0	265	265	416	800	2015	
22	2016	54	807	0	0	421	1,282	151	151	0	265	265	416	866	2016	
23	2017	58	874	0	0	421	1,353	151	1,028	0	265	265	1,293	900	2017	
24	2018	61	947	0	0	421	1,429	151	151	0	265	265	416	1,013	2018	
25	2019	65	1,043	0	0	421	1,529	151	151	0	265	265	416	1,113	2019	
26	2020	65	1,043	0	0	421	1,529	151	151	0	265	265	416	1,113	2020	
27	2021	65	1,043	0	0	421	1,529	151	151	0	265	265	416	1,113	2021	
28	2022	65	1,043	0	0	421	1,529	151	1,266	0	265	265	1,682	-153	2022	
29	2023	65	1,043	0	0	421	1,529	151	151	0	265	265	416	1,113	2023	
30	2024	65	1,043	0	0	421	1,529	151	151	0	265	265	416	1,113	2024	
31	2025	65	1,043	0	0	421	1,529	151	151	0	265	265	416	1,113	2025	
32	2026	65	1,043	0	0	421	1,529	151	151	0	265	265	416	1,113	2026	
33	2027	65	1,043	0	0	421	1,529	151	151	0	265	265	416	1,113	2027	

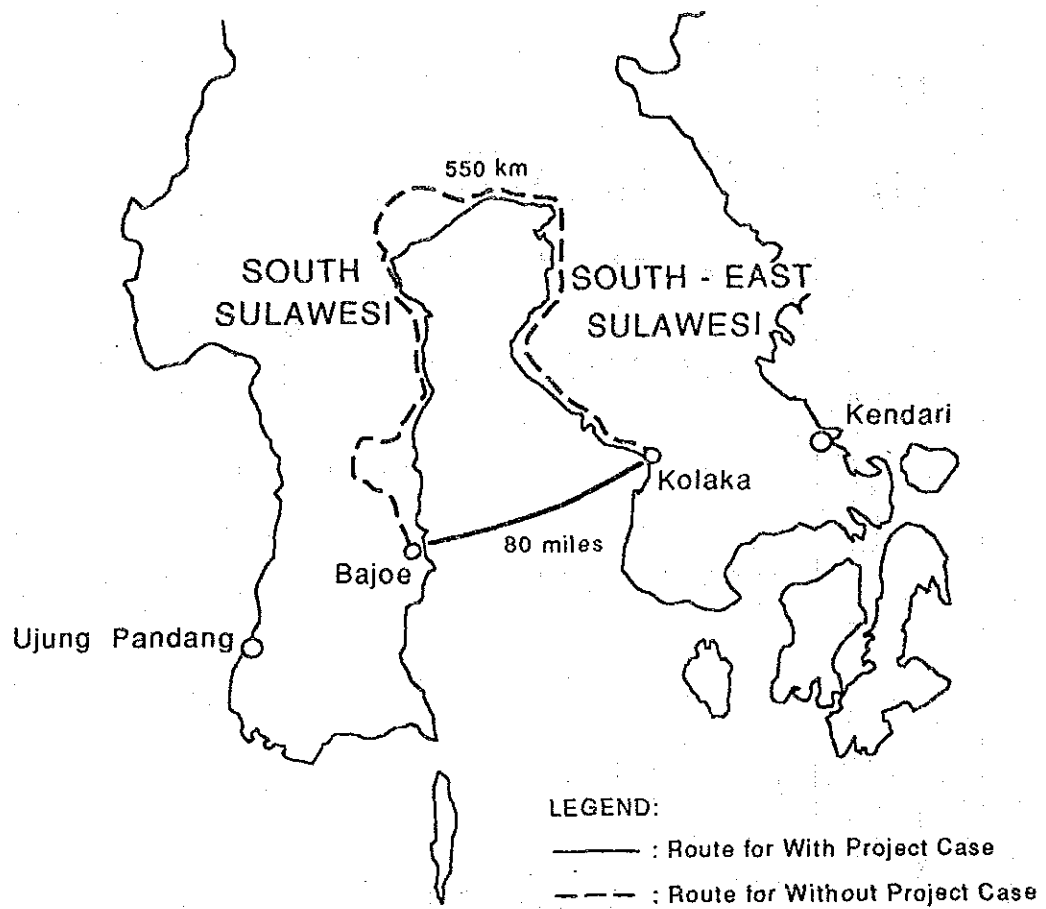


Fig. 9-4-3A Conceptual Route Map of Route 8 (Bajoe-Kolaka) for Economic Analysis

Table 9-4-21(1)A Future Traffic Demand, Traffic Capacity and Introducing of New Boats for With Case (Route 8)

Year	(A) Future Traffic Demand		Sedan		Truck (8 ton)		Sedan		Truck (8 ton)		Sedan		Truck (8 ton)		Sedan		Truck (8 ton)		Sedan		Truck (8 ton)		Sedan		Truck (8 ton)				
	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)	Passengers	Truck (8 ton)			
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)			
1	521,720	13,840	14,619	5,555	19,395	1998	26	56,000	1,600	32	118,300	1,600	5,900																
2	557,991	14,997	15,859	6,026	21,023	1999	27	56,000	1,600	33	118,300	1,600	5,900																
3	596,782	16,250	17,206	6,538	22,788	2000	28	56,000	1,600	29	56,000	1,600	5,900																
4	635,793	17,541	18,593	7,065	24,606	2001	29	56,000	1,600	30	56,000	1,600	5,900																
5	677,355	18,933	20,093	7,635	26,568	2002	30	56,000	1,600	31	56,000	1,600	5,900																
6	721,634	20,437	21,714	8,251	28,688	2003	31	56,000	1,600	32	56,000	1,600	5,900																
7	768,807	22,059	23,466	8,917	30,976	2004	32	56,000	1,600	33	56,000	1,600	5,900																
8	819,063	23,810	25,359	9,636	33,446	2005	33	56,000	1,600																				
9	869,631	25,613	27,311	10,378	35,991	2006																							
10	923,320	27,553	29,413	11,177	38,730	2007																							
11	980,325	29,639	31,678	12,036	41,677	2008																							
12	1,040,848	31,883	34,116	12,964	44,847	2009																							
13	1,105,108	34,297	36,742	13,962	48,259	2010																							
14	1,173,336	36,894	39,571	15,037	51,931	2011																							
15	1,182,500	38,390	41,078	15,610	54,000	2012																							
16	1,182,500	38,390	41,078	15,610	54,000	2013																							
17	1,182,500	38,390	41,078	15,610	54,000	2014																							
18	1,182,500	38,390	41,078	15,610	54,000	2015																							
19	1,182,500	38,390	41,078	15,610	54,000	2016																							
20	1,182,500	38,390	41,078	15,610	54,000	2017																							
21	1,182,500	38,390	41,078	15,610	54,000	2018																							
22	1,182,500	38,390	41,078	15,610	54,000	2019																							
23	1,182,500	38,390	41,078	15,610	54,000	2020																							
24	1,182,500	38,390	41,078	15,610	54,000	2021																							
25	1,182,500	38,390	41,078	15,610	54,000	2022																							
26	1,182,500	38,390	41,078	15,610	54,000	2023																							
27	1,182,500	38,390	41,078	15,610	54,000	2024																							
28	1,182,500	38,390	41,078	15,610	54,000	2025																							
29	1,182,500	38,390	41,078	15,610	54,000	2026																							
30	1,182,500	38,390	41,078	15,610	54,000	2027																							

Table 9-4-21(2)A Future Traffic Demand, Traffic Capacity and Introducing of  
New Boats for With Case (Route 8)

(3) Bone Raya Age	(4) Menak		(5) Edha		(6) Total Capacity of Existing Boats (Annual Capacity)		Vehicles (8 ton truck unit)		
	Annual Capacity Passengers	Vehicles (8 ton truck unit)	Annual Capacity Passengers	Vehicles (8 ton truck unit)	Annual Capacity Passengers	Vehicles (8 ton truck unit)			
29	94,600	2,800	28	88,100	31	52,200	3,200	409,200	17,000
30	94,600	2,800	29	88,100	32	52,200	3,200	409,200	17,000
31	94,600	2,800	30	88,100	33	52,200	3,200	290,900	11,100
32	94,600	2,800	31	88,100	3,500			238,700	7,900
33	94,600	2,800	32	88,100	3,500			238,700	7,900
			33	88,100	3,500			144,100	5,100
								56,000	1,600
								56,000	1,600
								0	0
								0	0
								0	0
								0	0
								0	0
								0	0
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								0	0
								0	0
								0	0
								0	0
								0	0

Table 9-4-21(3)A Future Traffic Demand, Traffic Capacity and Introducing of New Boats for With Case (Route 8)

Year	Assumption: Traffic Capacity of New Ferry Boat (per One Boat)		(B-2) New Boats		Total Capacity of New Boats		(B-3) Total Annual Traffic Capacity		(C) Deviation Between Traffic Demand and Total Annual Traffic Capacity		
	Passengers	Vehicles	Number of New Boats	(Annual Capacity)	Passengers	Vehicles	(Annual Capacity)	Passengers	Vehicles	Passengers	Vehicles
	236,500	10,800 (8 ton truck unit)									(8 ton truck unit)
1998	1	236,500	10,800	645,700	27,800	123,980	8,405				
1999	1	236,500	10,800	645,700	27,800	87,709	6,777				
2000	2	473,000	21,600	763,900	32,700	167,118	9,912				
2001	2	473,000	21,600	711,700	29,500	75,907	4,894				
2002	2	473,000	21,600	711,700	29,500	34,345	2,932				
2003	3	709,500	32,400	853,600	37,500	131,966	8,812				
2004	4	946,000	43,200	1,002,000	44,800	233,193	13,824				
2005	4	946,000	43,200	1,002,000	44,800	182,937	11,354				
2006	4	946,000	43,200	946,000	43,200	76,369	7,209				
2007	4	946,000	43,200	946,000	43,200	22,680	4,470				
2008	5	1,182,500	54,000	1,182,500	54,000	202,175	12,323				
2009	5	1,182,500	54,000	1,182,500	54,000	141,652	9,153				
2010	5	1,182,500	54,000	1,182,500	54,000	77,392	5,741				
2011	5	1,182,500	54,000	1,182,500	54,000	9,164	2,069				
2012	5	1,182,500	54,000	1,182,500	54,000	0	0				
2013	5	1,182,500	54,000	1,182,500	54,000	0	0				
2014	5	1,182,500	54,000	1,182,500	54,000	0	0				
2015	5	1,182,500	54,000	1,182,500	54,000	0	0				
2016	5	1,182,500	54,000	1,182,500	54,000	0	0				
2017	5	1,182,500	54,000	1,182,500	54,000	0	0				
2018	5	1,182,500	54,000	1,182,500	54,000	0	0				
2019	5	1,182,500	54,000	1,182,500	54,000	0	0				
2020	5	1,182,500	54,000	1,182,500	54,000	0	0				
2021	5	1,182,500	54,000	1,182,500	54,000	0	0				
2022	5	1,182,500	54,000	1,182,500	54,000	0	0				
2023	5	1,182,500	54,000	1,182,500	54,000	0	0				
2024	5	1,182,500	54,000	1,182,500	54,000	0	0				
2025	5	1,182,500	54,000	1,182,500	54,000	0	0				
2026	5	1,182,500	54,000	1,182,500	54,000	0	0				
2027	5	1,182,500	54,000	1,182,500	54,000	0	0				

Table 9-4-21(4)A Future Traffic Demand, Traffic Capacity and Introducing of New Boats for With Case (Route 8)

(D) Share Ratio of Capacity for Passengers by Existing Boat and New Boats

(E) Passengers Shared by Existing Boat and New Boats

Year	(1) Existing Boats	(2) New Boats	Total Passengers	(1) Existing Boats	(2) New Boats
1998	63%	37%	521,720	328,684	193,036
1999	63%	37%	557,991	351,534	206,457
2000	38%	62%	596,782	226,777	370,005
2001	34%	66%	635,793	216,170	419,623
2002	34%	66%	677,355	230,301	447,054
2003	17%	83%	721,634	122,678	598,956
2004	6%	94%	768,807	46,128	722,679
2005	6%	94%	819,063	49,144	769,919
2006	0%	100%	869,631	0	869,631
2007	0%	100%	923,320	0	923,320
2008	0%	100%	980,325	0	980,325
2009	0%	100%	1,040,848	0	1,040,848
2010	0%	100%	1,105,108	0	1,105,108
2011	0%	100%	1,173,336	0	1,173,336
2012	0%	100%	1,182,500	0	1,182,500
2013	0%	100%	1,182,500	0	1,182,500
2014	0%	100%	1,182,500	0	1,182,500
2015	0%	100%	1,182,500	0	1,182,500
2016	0%	100%	1,182,500	0	1,182,500
2017	0%	100%	1,182,500	0	1,182,500
2018	0%	100%	1,182,500	0	1,182,500
2019	0%	100%	1,182,500	0	1,182,500
2020	0%	100%	1,182,500	0	1,182,500
2021	0%	100%	1,182,500	0	1,182,500
2022	0%	100%	1,182,500	0	1,182,500
2023	0%	100%	1,182,500	0	1,182,500
2024	0%	100%	1,182,500	0	1,182,500
2025	0%	100%	1,182,500	0	1,182,500
2026	0%	100%	1,182,500	0	1,182,500
2027	0%	100%	1,182,500	0	1,182,500

Table 9-4-22(1)A Future Traffic Demand, Traffic Capacity and Overflowed Traffic Volume for Without Case (Route 8)

Year	(A) Future Traffic Demand										Share Ratio of Composition
	Passengers	Truck (8 ton)	Sedan	Truck + Sedan	Sedan in terms of Truck (8 ton) 0.38	Vehicles (8 ton Truck unit)	Composition Truck (8 ton)	Sedan	Composition of	Share Ratio of Composition	
1 1998	521,720	13,840	14,619	(28,459)	5,555	19,395	48.6%	51.4%	1.06	1.06	
2 1999	557,991	14,997	15,859	(30,856)	6,026	21,023	48.6%	51.4%	1.06	1.06	
3 2000	596,782	16,250	17,206	(33,456)	6,538	22,788	48.6%	51.4%	1.06	1.06	
4 2001	635,793	17,541	18,593	(36,134)	7,065	24,606	48.5%	51.5%	1.06	1.06	
5 2002	677,355	18,933	20,093	(39,026)	7,635	26,568	48.5%	51.5%	1.06	1.06	
6 2003	721,634	20,437	21,714	(42,151)	8,251	28,688	48.5%	51.5%	1.06	1.06	
7 2004	768,807	22,059	23,466	(45,525)	8,917	30,976	48.5%	51.5%	1.06	1.06	
8 2005	819,063	23,810	25,359	(49,169)	9,636	33,446	48.4%	51.6%	1.07	1.07	
9 2006	869,631	25,613	27,311	(52,924)	10,378	35,991	48.4%	51.6%	1.07	1.07	
10 2007	923,320	27,553	29,413	(56,966)	11,177	38,730	48.4%	51.6%	1.07	1.07	
11 2008	980,325	29,639	31,678	(61,317)	12,038	41,677	48.3%	51.7%	1.07	1.07	
12 2009	1,040,848	31,893	34,116	(65,999)	12,964	44,847	48.3%	51.7%	1.07	1.07	
13 2010	1,105,108	34,297	36,742	(71,039)	13,962	48,259	48.3%	51.7%	1.07	1.07	
14 2111	1,173,336	36,894	39,571	(76,465)	15,037	51,931	48.2%	51.8%	1.07	1.07	
15 2012	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
16 2013	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
17 2014	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
18 2015	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
19 2016	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
20 2017	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
21 2018	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
22 2019	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
23 2020	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
24 2021	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
25 2022	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
26 2023	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
27 2024	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
28 2025	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
29 2026	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	
30 2027	1,182,500	38,390	41,078	(79,466)	15,610	54,000	48.3%	51.7%	1.07	1.07	



Table 9-4-22(2)A Future Traffic Demand, Traffic Capacity and Overflowed Traffic Volume for Without Case (Route 8)

Year	(B) Total Capacity of Existing Boats		(C) Overflowed Traffic		(D) Breakdown of Overflowed Vehicles				
	(Annual Capacity) Passengers	Vehicles	Passengers	Vehicles (8 ton truck unit)	Truck (8 ton)	Sedan	(For check) Truck (8 ton) + Sedan in terms of 8 ton truck	(For check) Sedan in terms of 8 ton truck	(For check) Vehicles (8 ton Truck unit)
1988	409,200	17,000	112,520	0	0	0	0	0	0
1989	409,200	17,000	148,791	4,023	2,868	3,040	(5,908)	(1,155)	(4,023)
2000	409,200	17,000	187,582	5,788	4,126	4,374	(8,500)	(1,662)	(5,788)
2001	409,200	17,000	226,593	7,606	5,422	5,747	(11,169)	(2,184)	(7,606)
2002	409,200	17,000	268,155	9,568	6,821	7,230	(14,051)	(2,747)	(9,568)
2003	409,200	17,000	312,434	11,688	8,332	9,832	(17,164)	(3,356)	(11,688)
2004	409,200	17,000	359,607	13,976	9,963	10,561	(20,524)	(4,013)	(13,976)
2005	409,200	17,000	409,863	16,446	11,692	12,510	(24,202)	(4,754)	(16,446)
2006	409,200	17,000	460,431	18,991	13,501	14,446	(27,947)	(5,490)	(18,991)
2007	409,200	17,000	514,120	21,730	15,449	16,530	(31,979)	(6,282)	(21,731)
2008	409,200	17,000	571,125	24,677	17,544	18,772	(36,316)	(7,133)	(24,677)
2009	409,200	17,000	631,648	27,847	19,797	21,183	(40,980)	(8,049)	(27,846)
2010	409,200	17,000	695,908	31,259	22,223	23,779	(46,002)	(9,036)	(31,259)
2111	409,200	17,000	764,136	34,931	24,834	26,572	(51,406)	(10,098)	(34,932)
2012	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2013	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2014	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2015	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2016	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2017	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2018	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2019	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2020	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2021	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2022	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2023	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2024	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2025	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2026	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)
2027	409,200	17,000	773,300	37,000	26,305	28,146	(54,451)	(10,596)	(37,001)

Table 9-4-22(3)A Future Traffic Demand, Traffic Capacity and Overflowed Traffic Volume for Without Case (Route 8)

(E) Breakdown of Overflowed Passengers

Year	Overflowed Total Passengers	Overflowed Total Number of Sedan	Overflowed Passengers Related to Sedan Trips (Load Factor = 3.0)	Overflowed Total Passengers Related to Bus (Load Factor = 40.0)	Overflowed Total Number of Bus Trips
1998	112,520	0	0	112,520	2,813
1999	148,791	3,040	9,120	139,671	3,492
2000	187,582	4,374	13,121	174,461	4,362
2001	226,593	5,747	17,242	209,351	5,234
2002	268,155	7,230	21,691	246,464	6,162
2003	312,434	8,832	26,496	285,938	7,148
2004	359,607	10,561	31,682	327,925	8,198
2005	409,863	12,510	37,531	372,332	9,308
2006	460,431	14,446	43,338	417,093	10,427
2007	514,120	16,530	49,591	464,529	11,613
2008	571,125	18,772	56,316	514,809	12,870
2009	631,648	21,183	63,548	568,100	14,203
2010	695,908	23,779	71,336	624,572	15,614
2111	764,136	26,572	79,717	684,419	17,110
2012	773,300	28,146	84,439	688,861	17,222
2013	773,300	28,146	84,439	688,861	17,222
2014	773,300	28,146	84,439	688,861	17,222
2015	773,300	28,146	84,439	688,861	17,222
2016	773,300	28,146	84,439	688,861	17,222
2017	773,300	28,146	84,439	688,861	17,222
2018	773,300	28,146	84,439	688,861	17,222
2019	773,300	28,146	84,439	688,861	17,222
2020	773,300	28,146	84,439	688,861	17,222
2021	773,300	28,146	84,439	688,861	17,222
2022	773,300	28,146	84,439	688,861	17,222
2023	773,300	28,146	84,439	688,861	17,222
2024	773,300	28,146	84,439	688,861	17,222
2025	773,300	28,146	84,439	688,861	17,222
2026	773,300	28,146	84,439	688,861	17,222
2027	773,300	28,146	84,439	688,861	17,222

Table 9-4-23(1)A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (With) (Route 8)

Ferry Boats		Assumption: Unit Procurement Cost of Boats per ton = 6.05 Rp. Million /ton										New Boats		1,000 Ton per Boat	
Year	(1) Existing Boats		(2) Bantien		(3) Bone Raya		(4) Merak		(5) Edha		Year	Procurement of Boats	Total Number of Boats	Accumulated Tonnage	
	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)					
1	496	3,001	988	5,977	340	2,057	510	3,086	578	3,497	1998	1	1	1,000	
2	496	3,001	988	5,977	340	2,057	510	3,086	578	3,497	1999	1	1	1,000	
3	496	3,001			340	2,057	510	3,086	578	3,497	2000	1	2	2,000	
4	496	3,001			340	2,057	510	3,086			2001		2	2,000	
5	496	3,001			340	2,057	510	3,086			2002		2	2,000	
6	496	3,001									2003	1	3	3,000	
7	496	3,001									2004	1	4	4,000	
8	496	3,001									2005		4	4,000	
9											2006		4	4,000	
10											2007		4	4,000	
11											2008	1	5	5,000	
12											2009		5	5,000	
13											2010		5	5,000	
14											2011		5	5,000	
15											2012		5	5,000	
16											2013		5	5,000	
17											2014		5	5,000	
18											2015		5	5,000	
19											2016		5	5,000	
20											2017		5	5,000	
21											2018		5	5,000	
22											2019		5	5,000	
23											2020		5	5,000	
24											2021		5	5,000	
25											2022		5	5,000	
26											2023		5	5,000	
27											2024		5	5,000	
28											2025		5	5,000	
29											2026		5	5,000	
30											2027		5	5,000	

**Table 9-4-23(2)A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (With) (Route 8)**

		Unit Operation Cost per mile/ton (Rp.) :		12.6 (Rp. mile/ton/year)		80 (miles)				
		Distance :						3%		
		(B) Operation Cost		(round trip (42))		(C) Maintenance Cost				
Procurement Cost	Accumulated Cost	Existing Boats		New Boats		Existing Boat		New Boat		Total O/M Cost Amount (Rp. Million)
		Total Tonnage	Cost Amount (Rp. Million)	Total Tonnage	Cost Amount (Rp. Million)	Total of Proc. Cost Equivalent (Rp. Million)	Accumulated Proc. Cost (Rp. Million)	Total Maintenance Cost Amount (Rp. Million)		
6,050	0	2,912	980	1,000	673	1,653	6,050	23,668	710	2,363
0	6,050	2,912	980	1,000	673	1,653	6,050	23,668	710	2,363
6,050	12,100	1,924	647	2,000	1,346	1,993	12,100	23,740	712	2,705
0	12,100	1,246	453	2,000	1,346	1,799	12,100	20,243	607	2,408
0	12,100	1,346	453	2,000	1,346	1,799	12,100	20,243	607	2,408
6,050	18,150	1,008	336	3,000	2,018	2,356	18,150	24,236	727	3,083
6,050	24,200	496	167	4,000	2,891	2,859	24,200	27,201	816	3,674
0	24,200	496	167	4,000	2,891	2,859	24,200	27,201	816	3,674
0	24,200	0	0	4,000	2,891	2,891	24,200	24,200	726	3,417
0	24,200	0	0	4,000	2,891	2,891	24,200	24,200	726	3,417
6,050	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272
0	30,250	0	0	5,000	3,364	3,364	30,250	30,250	908	4,272

Table 9-4-24(1)A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (Without) (Route 8)

Ferry Boats      Assumption: Unit Procurement Cost of Boats per ton = 6.05 Rp. Million/ton

Year	(1) Existing Boats		(2) Bantén		(3) Bone Raya		(4) Merak		(5) Echa		Replaced Boats		
	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)	Year	Tonnage	Accumulated Tonnage
1	496	3,001	988	5,977	340	2,057	510	3,086	578	3,497	1998		0
2	496	3,001	988	5,977	340	2,057	510	3,086	578	3,497	1999		0
3	496	3,001			340	2,057	510	3,086	578	3,497	2000	988	988
4	496	3,001			340	2,057	510	3,086	578	3,497	2001	578	1566
5	496	3,001			340	2,057	510	3,086	578	3,497	2002	578	1566
6	496	3,001			340	2,057	510	3,086	578	3,497	2003	340	1906
7	496	3,001			340	2,057	510	3,086	578	3,497	2004	510	2416
8	496	3,001									2005	496	2912
9											2006	496	2912
10											2007		2912
11											2008		2912
12											2009		2912
13											2010		2912
14											2011		2912
15											2012		2912
16											2013		2912
17											2014		2912
18											2015		2912
19											2016		2912
20											2017		2912
21											2018		2912
22											2019		2912
23											2020		2912
24											2021		2912
25											2022		2912
26											2023		2912
27											2024		2912
28											2025		2912
29											2026		2912
30											2027		2912



Table 9-4-25(1)A Estimation of Time Cost Saving Benefits (Route 8)

Assumption: Unit Time Cost per Passenger (hour) = 225 (Rp./hour)

(1) Time Cost for Without Case

	(a) Related to Passengers Within Traffic Capacity			(b) Related to Passengers Overflowed			(c) Without	
	Passengers Within Traffic Capacity	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	Passengers Overflowed Traffic Capacity	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	Time Cost Total	(Rp. 1,000)
1	409,200	8	736,560	112,520	15	379,755	1,116,315	
2	409,200	8	736,560	148,791	15	502,170	1,238,730	
3	409,200	8	736,560	187,582	15	633,089	1,369,649	
4	409,200	8	736,560	226,593	15	764,751	1,501,311	
5	409,200	8	736,560	268,155	15	905,023	1,641,583	
6	409,200	8	736,560	312,434	15	1,054,465	1,791,025	
7	409,200	8	736,560	359,607	15	1,213,674	1,950,234	
8	409,200	8	736,560	409,863	15	1,383,288	2,119,848	
9	409,200	8	736,560	460,431	15	1,553,955	2,290,515	
10	409,200	8	736,560	514,120	15	1,735,155	2,471,715	
11	409,200	8	736,560	571,125	15	1,927,547	2,664,107	
12	409,200	8	736,560	631,648	15	2,131,812	2,868,372	
13	409,200	8	736,560	695,908	15	2,348,690	3,085,250	
14	409,200	8	736,560	764,136	15	2,578,959	3,315,519	
15	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
16	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
17	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
18	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
19	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
20	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
21	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
22	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
23	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
24	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
25	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
26	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
27	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
28	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
29	409,200	8	736,560	773,300	15	2,609,888	3,346,448	
30	409,200	8	736,560	773,300	15	2,609,888	3,346,448	

Table 9-4-25(2)A Estimation of Time Cost Saving Benefits (Route 8)

(2) Time Cost for With Case									
(a) Related to Passengers Using Existing Boats			(b) Related to Passengers Using New Boats			(c) With Time Cost Total		Time Cost Saving Benefits	
Passengers Using Existing Boats	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	Passengers Using New Boats	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	(Rp. 1,000)	(Rp. 1,000)	(Rp. 1,000)	(Rp. Million)
8	5.5								
328,684		591,631	193,036		298,882	890,513	285,802	286	1988
351,534		632,761	206,457		255,491	888,252	350,478	350	1989
226,777		408,199	370,005		457,891	866,080	503,569	504	2000
216,170		389,106	419,623		519,283	908,389	592,922	593	2001
230,301		414,542	447,054		553,229	967,771	673,812	674	2002
122,678		220,820	599,956		741,208	962,028	828,997	829	2003
46,128		83,030	722,679		894,315	977,345	972,889	973	2004
49,144		88,459	769,919		952,775	1,041,234	1,078,614	1,079	2005
0		0	869,631		1,076,168	1,076,168	1,214,347	1,214	2006
0		0	923,320		1,142,609	1,142,609	1,329,106	1,329	2007
0		0	980,325		1,213,152	1,213,152	1,450,955	1,451	2008
0		0	1,040,848		1,288,049	1,288,049	1,580,323	1,580	2009
0		0	1,105,108		1,367,571	1,367,571	1,717,679	1,718	2010
0		0	1,173,336		1,452,003	1,452,003	1,863,516	1,864	2011
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2012
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2013
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2014
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2015
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2016
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2017
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2018
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2019
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2020
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2021
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2022
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2023
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2024
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2025
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2026
0		0	1,182,500		1,463,344	1,463,344	1,883,104	1,883	2027



Table 9-4-26A Estimation of Vehicle Operating Cost (VOC) Saving Benefits (Route 8)

Year	Assumption: (1) Distance of Road between Bajpe - Kolai				(2) Unit VOC:				Vehicle Operating Cost Saving Benefits (Rp. 1,000)			
	Truck (8 ton Truck)	Sedan	Bus	Total	3 ton Truck (50km/h)	8 ton Truck (50km/h)	Sedan (50km/h)	Bus (50km/h)	Truck (8 ton Truck)	Sedan	Bus	Total
1988	0	0	2,813	0	341	293	35	0	0	0	669,916	670
1989	2,868	3,040	3,492	9,399	341	293	35	670,395	568,495	831,620	2,070,510	2,071
2000	4,126	4,374	4,362	12,862	425	378	35	964,453	817,956	1,038,810	2,821,119	2,821
2001	5,422	5,747	5,234	16,403	433	383	35	1,267,393	1,074,749	1,246,477	3,588,619	3,589
2002	6,821	7,230	6,162	20,213	340	291	35	1,594,409	1,352,059	1,467,480	4,413,948	4,414
2003	8,332	8,832	7,148	24,312	433	383	35	1,947,605	1,651,569	1,702,296	5,301,470	5,301
2004	9,953	10,561	8,198	28,712	341	293	35	2,328,851	1,974,966	1,952,354	6,256,071	6,256
2005	11,692	12,510	9,308	33,510	341	293	35	2,733,005	2,389,452	2,216,700	7,289,157	7,289
2006	13,501	14,446	10,427	38,374	341	293	35	3,155,859	2,701,415	2,483,190	8,340,464	8,340
2007	15,449	16,530	11,613	43,592	341	293	35	3,611,204	3,091,190	2,765,636	9,468,030	9,468
2008	17,544	18,772	12,870	49,186	341	293	35	4,100,910	3,510,379	3,064,991	10,676,280	10,676
2009	19,797	21,183	14,203	55,183	341	293	35	4,627,549	3,961,182	3,382,444	11,971,175	11,971
2010	22,223	23,779	15,614	61,616	341	293	35	5,194,626	4,446,600	3,718,474	13,359,700	13,360
2011	24,834	26,572	17,110	68,516	341	293	35	5,804,948	4,969,035	4,074,747	14,848,730	14,849
2012	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2013	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2014	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2015	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2016	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2017	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2018	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2019	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2020	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2021	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2022	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2023	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2024	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2025	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2026	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514
2027	26,305	28,146	17,222	71,673	341	293	35	6,148,794	5,263,367	4,101,419	15,513,580	15,514

Table 9-4-27A Economic Analysis for Route 8, Bajoe-Kolaka Route

EIRR = 16.0%  
 NPV = 25,751 (Million Rp.)  
 B/C = 1.4 (Discount Rate Used = 10%)  
 (Unit: Rp. Million)

Year	Benefits				Costs				Year					
	(Users Benefit)		(Invest. & O/M Costs Saving Benefit)		Total (With Costs)		Terminal Facilities							
	Passengers Time Saving	Vehicle VOC Saving	Terminal O/M Costs	Ferry Boats Replacement O/M Costs	Total	Benefit	Terminal Facilities	O/M Costs	Total	Ferry Boats Procurement	O/M Costs	Total	With Costs Total	Net Cash Flow
1	1995				0	0	871		871			0	871	-871
2	1996				0	0	11,665		11,665			0	11,665	-11,665
3	1997				0	0	11,021		11,021			0	11,021	-11,021
4	1998	286	670	190	0	1,509	2,655		329	6,050	2,363	8,413	8,742	-6,087
5	1999	350	2,071	190	0	1,509	4,120		329	0	2,363	2,363	2,992	1,428
6	2000	504	2,821	190	5,977	1,509	11,001		329	6,050	2,705	8,755	9,084	1,917
7	2001	593	3,589	190	3,497	1,509	9,378		329	0	2,406	2,406	2,735	6,643
8	2002	674	4,414	190	0	1,509	6,787		329	0	2,406	2,406	2,735	4,052
9	2003	829	5,301	190	2,057	1,509	9,886		347	6,050	3,083	9,133	9,480	406
10	2004	973	6,256	190	3,066	1,509	12,013		347	6,050	3,674	9,724	10,071	1,942
11	2005	1,079	7,289	190	0	1,509	10,067		347	0	3,674	3,674	4,021	6,046
12	2006	1,214	8,340	190	3,001	1,509	14,253		347	0	3,417	3,417	3,764	10,489
13	2007	1,329	9,468	190	0	1,509	12,496	1,907	347	0	3,417	3,417	5,671	6,825
14	2008	1,451	10,676	190	0	1,509	13,826		365	6,050	4,272	10,322	10,687	3,138
15	2009	1,580	11,971	190	0	1,509	15,250		365	0	4,272	4,272	4,637	12,140
16	2010	1,718	13,360	190	0	1,509	16,777		365	0	4,272	4,272	4,637	13,775
17	2011	1,864	14,849	190	0	1,509	18,412		365	0	4,272	4,272	4,637	14,459
18	2012	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
19	2013	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
20	2014	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
21	2015	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
22	2016	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
23	2017	1,883	15,514	190	0	1,509	19,096	1,907	365	2,272	4,272	4,272	6,544	12,552
24	2018	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
25	2019	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
26	2020	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
27	2021	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
28	2022	1,883	15,514	190	0	1,509	19,096	3,558	3,923	0	4,272	4,272	6,195	10,901
29	2023	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
30	2024	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
31	2025	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
32	2026	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459
33	2027	1,883	15,514	190	0	1,509	19,096		365	0	4,272	4,272	4,637	14,459

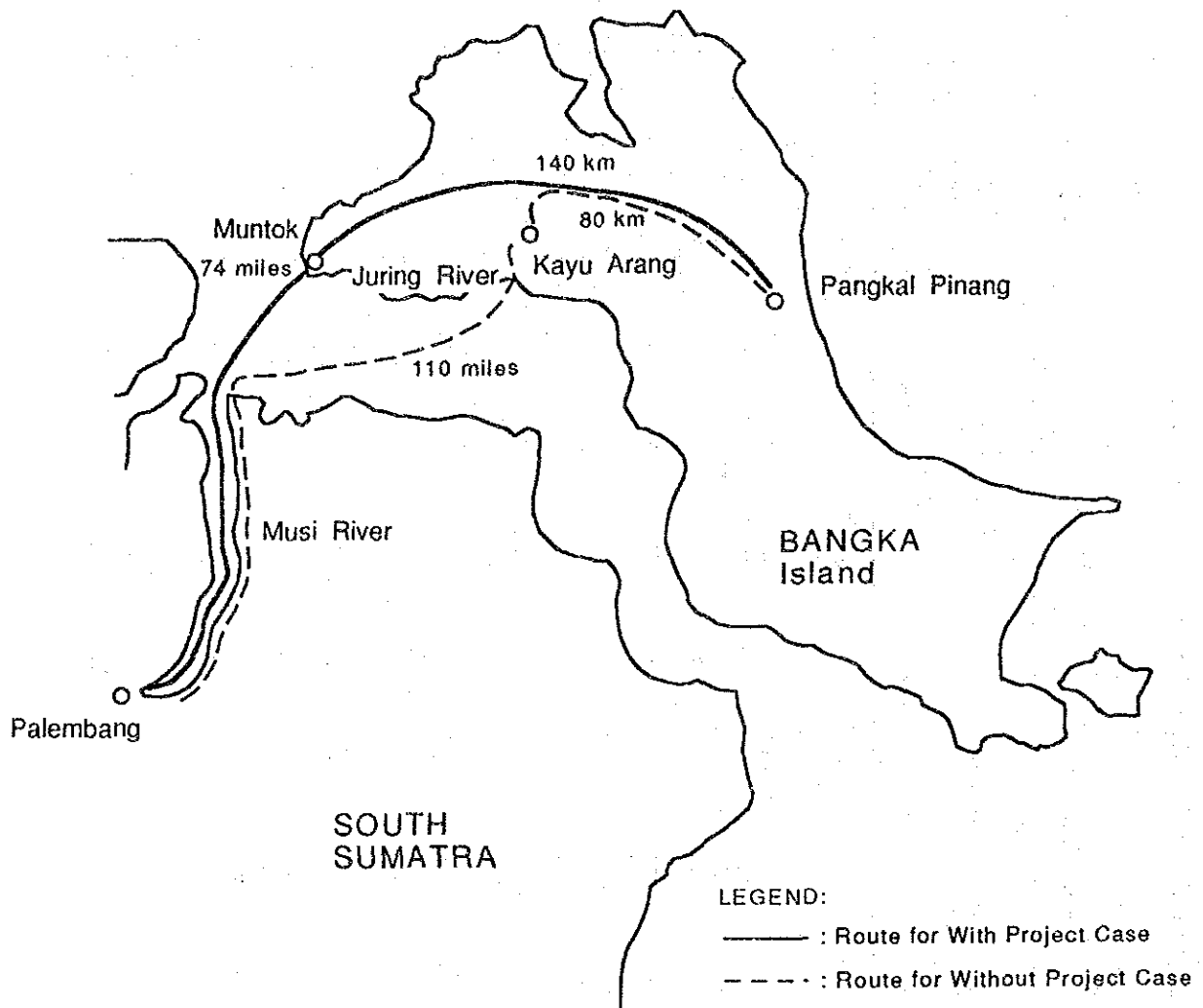


Fig. 9-4-4A Conceptual Route Map of Route 9-1 (Palembang-Moker) for Economic Analysis

Table 9-4-28(1)A Future Traffic Demand, Traffic Capacity and Introducing of New Boats for With Case (Route 9-1)

Year	(A) Future Traffic Demand			(B) Annual Traffic Capacity			(2) Bangka Raya							
	Passengers	Truck (3 ton)	Sedan	Passengers	Truck (3 ton)	Sedan	Passengers	Truck (3 ton)	Age	Passengers	Vehicles	Age	Passengers	Vehicles
1	189,484	10,151	5,469	13,815	3,654	19	18,500	2,400	19	21,300	2,400	28	21,300	2,400
2	198,714	10,739	5,839	14,651	3,912	20	18,500	2,400	20	21,300	2,400	29	21,300	2,400
3	208,394	11,360	6,234	15,537	4,177	21	18,500	2,400	21	21,300	2,400	30	21,300	2,400
4	217,692	11,971	6,630	16,413	4,442	22	18,500	2,400	22	21,300	2,400			
5	227,404	12,614	7,051	17,338	4,724	23	18,500	2,400	23	21,300	2,400			
6	237,550	13,292	7,499	18,316	5,024	24	18,500	2,400	24	21,300	2,400			
7	248,148	14,007	7,976	19,351	5,344	25	18,500	2,400	25	21,300	2,400			
8	259,220	14,760	8,483	20,444	5,684	26	18,500	2,400	26	21,300	2,400			
9	270,121	15,515	9,000	21,545	6,030	27	18,500	2,400	27	21,300	2,400			
10	281,480	16,309	9,548	22,706	6,397	28	18,500	2,400	28	21,300	2,400			
11	293,318	17,143	10,130	23,930	6,787	29	18,500	2,400	29	21,300	2,400			
12	305,653	18,020	10,747	25,220	7,200	30	18,500	2,400	30	21,300	2,400			
13	318,507	18,942	11,401	26,581	7,639									
14	331,901	19,911	12,096	28,015	8,104									
15	345,859	20,930	12,833	29,528	8,598									
16	360,403	22,001	13,615	31,123	9,122									
17	375,559	23,126	14,444	32,803	9,677									
18	391,353	24,310	15,325	34,578	10,268									
19	407,811	25,554	16,258	36,447	10,893									
20	424,961	26,861	17,249	38,418	11,557									
21	442,832	28,236	18,300	40,496	12,261									
22	461,455	29,680	19,415	42,688	13,008									
23	480,861	31,198	20,597	44,998	13,800									
24	501,082	32,795	21,852	47,436	14,641									
25	522,155	34,473	23,184	50,006	15,533									
26	544,113	35,746	24,260	52,000	16,254									
27	566,995	35,746	24,260	52,000	16,254									
28	590,840	35,746	24,260	52,000	16,254									
29	615,687	35,746	24,260	52,000	16,254									
30	641,578	35,746	24,260	52,000	16,254									

Table 9-4-28(2)A Future Traffic Demand, Traffic Capacity and Introducing of New Boats for With Case (Route 9-1)

Assumption:		Traffic Capacity of New Ferry Boat											
		Passengers	Vehicles	197,100	10,400 (3 ton truck unit)								
(3) Total Capacity of Existing Boats (Annual Capacity)	Passengers	Vehicles	Year	Number of New Boats	Total Capacity of New Boats (Annual Capacity)		(B-3) Total Annual Traffic Capacity (Annual Capacity)		(C) Deviation Between Traffic Demand and Total Annual Traffic Capacity		Passengers	Vehicles	(3 ton truck unit)
					Passengers	Vehicles	Passengers	Vehicles	Passengers	Vehicles			
					(3 ton truck unit)	(3 ton truck unit)	(3 ton truck unit)	(3 ton truck unit)	(3 ton truck unit)	(3 ton truck unit)			
39,800		4,800	1998	1	197,100	10,400	236,900	15,200	47,416	1,385			
39,800		4,800	1999	1	197,100	10,400	236,900	15,200	38,186	549			
39,800		4,800	2000	2	394,200	20,800	434,000	25,600	225,606	10,063			
18,500		2,400	2001	2	394,200	20,800	412,700	23,200	195,008	6,787			
18,500		2,400	2002	2	394,200	20,800	412,700	23,200	185,296	5,862			
18,500		2,400	2003	2	394,200	20,800	412,700	23,200	175,150	4,884			
18,500		2,400	2004	2	394,200	20,800	412,700	23,200	164,552	3,849			
18,500		2,400	2005	2	394,200	20,800	412,700	23,200	153,480	2,756			
18,500		2,400	2006	2	394,200	20,800	412,700	23,200	142,579	1,655			
18,500		2,400	2007	2	394,200	20,800	412,700	23,200	131,220	494			
18,500		2,400	2008	3	591,300	31,200	609,800	33,600	316,482	9,670			
18,500		2,400	2009	3	591,300	31,200	609,800	33,600	304,147	8,380			
			2010	3	591,300	31,200	591,300	31,200	272,793	4,619			
			2011	3	591,300	31,200	591,300	31,200	259,399	3,185			
			2012	3	591,300	31,200	591,300	31,200	245,441	1,672			
			2013	3	591,300	31,200	591,300	31,200	230,897	77			
			2014	4	788,400	41,600	788,400	41,600	412,841	8,797			
			2015	4	788,400	41,600	788,400	41,600	397,047	7,022			
			2016	4	788,400	41,600	788,400	41,600	380,589	5,153			
			2017	4	788,400	41,600	788,400	41,600	363,439	3,182			
			2018	4	788,400	41,600	788,400	41,600	345,568	1,104			
			2019	5	985,500	52,000	985,500	52,000	524,045	9,312			
			2020	5	985,500	52,000	985,500	52,000	504,639	7,002			
			2021	5	985,500	52,000	985,500	52,000	484,418	4,564			
			2022	5	985,500	52,000	985,500	52,000	463,245	1,994			
			2023	5	985,500	52,000	985,500	52,000	441,387	0			
			2024	5	985,500	52,000	985,500	52,000	418,505	0			
			2025	5	985,500	52,000	985,500	52,000	394,660	0			
			2026	5	985,500	52,000	985,500	52,000	369,813	0			
			2027	5	985,500	52,000	985,500	52,000	343,922	0			

Table 9-4-28(3)A Future Traffic Demand, Traffic Capacity and Introducing of New Boats for With Case (Route 9-1)

Year	(D) Share Ratio of Capacity for Passengers by Existing Boat - New Boats		(E) Passengers Shared by Existing Boat - New Boats		(F) Breakdown of Vehicles						
	(1) Existing Boats	(2) New Boats	Total Passengers	(1) Existing Boats	(2) New Boats	Truck (3 ton Truck unit)	Sedan	Passengers	Passengers Related to Sedan (Load Factor = 3.0)	Passengers Related to Bus	Total Number of Bus Trips (Load Factor = 40.0)
1998	17%	83%	189,484	32,212	157,272	10,151	5,489	189,484	16,407	173,077	4,327
1999	17%	83%	198,714	33,781	164,933	10,739	5,839	198,714	17,517	181,197	4,530
2000	9%	91%	208,394	18,755	189,639	11,360	6,234	208,394	18,702	189,692	4,742
2001	4%	96%	217,692	8,708	208,984	11,971	6,630	217,692	19,890	197,802	4,945
2002	4%	96%	227,404	9,096	218,308	12,614	7,051	227,404	21,153	206,251	5,156
2003	4%	96%	237,550	9,502	228,048	13,292	7,499	237,550	22,497	215,053	5,376
2004	4%	96%	248,148	9,326	238,822	14,007	7,976	248,148	23,928	224,220	5,606
2005	4%	96%	259,220	10,369	248,851	14,760	8,483	259,220	25,449	233,771	5,844
2006	4%	96%	270,121	10,805	259,316	15,515	9,000	270,121	27,000	243,121	6,078
2007	4%	96%	281,480	11,259	270,221	16,309	9,548	281,480	28,644	252,836	6,321
2008	3%	97%	293,318	8,800	284,518	17,143	10,130	293,318	30,390	262,928	6,573
2009	3%	97%	305,653	9,170	296,483	18,020	10,747	305,653	32,241	273,412	6,805
2010	0%	100%	318,507	0	318,507	18,942	11,401	318,507	34,203	284,304	7,108
2011	0%	100%	331,901	0	331,901	19,911	12,096	331,901	36,288	295,613	7,390
2012	0%	100%	345,859	0	345,859	20,930	12,833	345,859	38,499	307,360	7,684
2013	0%	100%	360,403	0	360,403	22,001	13,615	360,403	40,845	319,558	7,889
2014	0%	100%	375,559	0	375,559	23,126	14,444	375,559	43,332	332,227	8,306
2015	0%	100%	391,353	0	391,353	24,310	15,325	391,353	45,975	345,378	8,634
2016	0%	100%	407,811	0	407,811	25,554	16,258	407,811	48,774	359,037	8,976
2017	0%	100%	424,961	0	424,961	26,861	17,249	424,961	51,747	373,214	9,330
2018	0%	100%	442,832	0	442,832	28,235	18,300	442,832	54,900	387,932	9,698
2019	0%	100%	461,455	0	461,455	29,680	19,415	461,455	58,245	403,210	10,080
2020	0%	100%	480,861	0	480,861	31,198	20,597	480,861	61,791	419,070	10,477
2021	0%	100%	501,082	0	501,082	32,795	21,852	501,082	65,556	435,526	10,888
2022	0%	100%	522,155	0	522,155	34,473	23,184	522,155	69,552	452,603	11,315
2023	0%	100%	544,113	0	544,113	35,746	24,260	544,113	72,780	471,333	11,783
2024	0%	100%	566,995	0	566,995	35,746	24,260	566,995	72,780	494,215	12,355
2025	0%	100%	590,840	0	590,840	35,746	24,260	590,840	72,780	518,060	12,952
2026	0%	100%	615,687	0	615,687	35,746	24,260	615,687	72,780	542,907	13,573
2027	0%	100%	641,578	0	641,578	35,746	24,260	641,578	72,780	568,798	14,220

Table 9-4-29(1)A Future Traffic Demand, Traffic Capacity and Introducing of Boats for Without Case (Route 9-1)

(Deck Space)  
Sedan : 9.5  
3t Truck : 14.3

Assumption : Age Limit of Existing Boats = 30 years

Year	(A) Future Traffic Demand			(B) Annual Traffic Capacity (B-1) Existing Boats			(1) Musi Raya			(2) Bangka Raya			
	Passengers	Truck (3 ton)	Sedan	Passengers	Truck (3 ton)	Sedan	Year	Age	(Annual Capacity) Passengers	Vehicles (3 ton truck unit)	Age	(Annual Capacity) Passengers	Vehicles (3 ton truck unit)
	(a)	(b)	(c)	(a)	(b)	(c)	(a)+(c)						
1	189,484	10,151	5,469	13,815	1998	19	18,500	2,400	28	21,300	2,400		
2	198,714	10,739	5,899	14,651	1999	20	18,500	2,400	29	21,300	2,400		
3	208,394	11,360	6,294	15,537	2000	21	18,500	2,400	30	21,300	2,400		
4	217,692	11,971	6,690	16,413	2001	22	18,500	2,400					
5	227,404	12,614	7,051	17,338	2002	23	18,500	2,400					
6	237,550	13,292	7,499	18,316	2003	24	18,500	2,400					
7	248,148	14,007	7,976	19,351	2004	25	18,500	2,400					
8	259,220	14,760	8,483	20,444	2005	26	18,500	2,400					
9	270,121	15,515	9,000	21,545	2006	27	18,500	2,400					
10	281,480	16,309	9,546	22,706	2007	28	18,500	2,400					
11	293,318	17,143	10,130	23,930	2008	29	18,500	2,400					
12	305,653	18,020	10,747	25,220	2009	30	18,500	2,400					
13	318,507	18,942	11,401	26,581	2010								
14	331,901	19,911	12,096	28,015	2011								
15	345,859	20,930	12,833	29,528	2012								
16	360,403	22,001	13,615	31,123	2013								
17	375,559	23,126	14,444	32,803	2014								
18	391,353	24,310	15,325	34,578	2015								
19	407,811	25,554	16,258	36,447	2016								
20	424,961	26,861	17,249	38,418	2017								
21	442,832	28,235	18,300	40,496	2018								
22	461,455	29,680	19,415	42,688	2019								
23	480,861	31,198	20,597	44,998	2020								
24	501,082	32,795	21,852	47,436	2021								
25	522,155	34,473	23,184	50,006	2022								
26	544,113	35,746	24,260	52,000	2023								
27	566,995	35,746	24,260	52,000	2024								
28	590,840	35,746	24,260	52,000	2025								
29	615,687	35,746	24,260	52,000	2026								
30	641,578	35,746	24,260	52,000	2027								

Table 9-4-29(2)A Future Traffic Demand, Traffic Capacity and Introducing of Boats for Without Case (Route 9-1)

		Assumption: Traffic Capacity of New Ferry Boat (Equivalent to Bangka Raya)		Assumption: Traffic Capacity of New LCM	
		Passengers	Vehicles	Passengers	Vehicles
		21,300	2,400 (3 ton truck unit)	21,300	2,400 (3 ton truck unit)
		(B-3) New LCM			
		Total Capacity of Existing Boats		Total Capacity of New Boats	
(3) Total Capacity of Existing Boats (Annual Capacity)	Year	Passengers	Vehicles	Passengers	Vehicles
(3 ton truck unit)				(3 ton truck unit)	
39,800	1998	8	170,400	19,200	0
39,800	1999	8	170,400	19,200	0
39,800	2000	8	170,400	19,200	0
18,500	2001	10	213,000	24,000	0
18,500	2002	10	213,000	24,000	0
18,500	2003	11	234,300	26,400	0
18,500	2004	11	234,300	26,400	0
18,500	2005	12	255,600	28,800	0
18,500	2006	12	255,600	28,800	0
18,500	2007	13	276,900	31,200	0
18,500	2008	13	276,900	31,200	0
18,500	2009	14	298,200	33,600	0
18,500	2010	15	319,500	36,000	0
	2011	16	340,800	38,400	0
	2012	17	362,100	40,800	0
	2013	17	362,100	40,800	0
	2014	18	383,400	43,200	0
	2015	19	404,700	45,600	0
	2016	20	426,000	48,000	0
	2017	20	426,000	48,000	0
	2018	20	426,000	48,000	0
	2019	20	426,000	48,000	2,400
	2020	20	426,000	48,000	4,800
	2021	20	426,000	48,000	7,200
	2022	20	426,000	48,000	9,600
	2023	20	426,000	48,000	12,000
	2024	20	426,000	48,000	14,400
	2025	20	426,000	48,000	16,800
	2026	20	426,000	48,000	19,200
	2027	20	426,000	48,000	21,600
					234,300



Table 9-4-29(3)A Future Traffic Demand, Traffic Capacity and Introducing of Boats for Without Case (Route 9-1)

Year	(B-3) Total Annual Traffic Capacity		(C) Deviation Between Traffic Demand and Total Annual Traffic Capacity		Year
	(Annual Capacity) Passengers	Vehicles (3 ton truck unit)	Passengers	Vehicles (3 ton truck unit)	
1998	210,200	24,000	20,716	10,185	1998
1999	210,200	24,000	11,486	9,349	1999
2000	210,200	24,000	1,806	8,463	2000
2001	231,500	26,400	13,908	9,987	2001
2002	231,500	26,400	4,096	9,062	2002
2003	252,800	28,800	15,250	10,484	2003
2004	252,800	28,800	4,652	9,449	2004
2005	274,100	31,200	14,380	10,756	2005
2006	274,100	31,200	3,979	9,655	2006
2007	295,400	33,600	13,920	10,894	2007
2008	295,400	33,600	2,082	9,670	2008
2009	316,700	36,000	11,047	10,780	2009
2010	319,500	36,000	993	9,419	2010
2011	340,800	38,400	8,899	10,385	2011
2012	362,100	40,800	16,241	11,272	2012
2013	362,100	40,800	1,697	9,677	2013
2014	383,400	43,200	7,841	10,397	2014
2015	404,700	45,600	13,347	11,022	2015
2016	426,000	48,000	18,189	11,553	2016
2017	426,000	48,000	1,039	9,582	2017
2018	447,300	50,400	4,488	9,904	2018
2019	468,600	52,800	7,145	10,112	2019
2020	489,900	55,200	9,039	10,202	2020
2021	511,200	57,600	10,118	10,164	2021
2022	532,500	60,000	10,345	9,994	2022
2023	553,800	62,400	9,687	10,400	2023
2024	575,100	64,800	8,105	12,800	2024
2025	596,400	67,200	5,560	15,200	2025
2026	617,700	69,600	2,013	17,600	2026
2027	660,900	74,400	18,722	22,400	2027

Table 9-4-30(1)A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (With) (Route 9-1)

Ferry Boats		Assumption: Unit Procurement Cost of Boats per ton = 6.05 Rp. Million/ton									
(1) Existing Boats		(2) Bangka Raya					New Boats				
Year	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)	Year	Procurement of Boats	Total Number of Boats	500 Ton per Boat	
										Accumulated Tonnage	
1	1998	148	895	199	1,204	1998	1	1	1	500	
2	1999	148	895	199	1,204	1999		1	1	500	
3	2000	148	895	199	1,204	2000		1	2	1,000	
4	2001	148	895			2001			2	1,000	
5	2002	148	895			2002			2	1,000	
6	2003	148	895			2003			2	1,000	
7	2004	148	895			2004			2	1,000	
8	2005	148	895			2005			2	1,000	
9	2006	148	895			2006			2	1,000	
10	2007	148	895			2007			2	1,000	
11	2008	148	895			2008		1	3	1,500	
12	2009	148	895			2009			3	1,500	
13	2010	148	895			2010			3	1,500	
14	2011					2011			3	1,500	
15	2012					2012			3	1,500	
16	2013					2013			3	1,500	
17	2014					2014		1	4	2,000	
18	2015					2015			4	2,000	
19	2016					2016			4	2,000	
20	2017					2017			4	2,000	
21	2018					2018			4	2,000	
22	2019					2019		1	5	2,500	
23	2020					2020			5	2,500	
24	2021					2021			5	2,500	
25	2022					2022			5	2,500	
26	2023					2023			5	2,500	
27	2024					2024			5	2,500	
28	2025					2025			5	2,500	
29	2026					2026			5	2,500	
30	2027					2027			5	2,500	

Table 9-4-30(2)A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (With) (Route 9-1)

(A) Procurement Cost of New Boats		(B) Operation Cost		Unit Operation Cost per mile/ton (Rp.) : Distance : 74 (miles) 74 (miles) (For Existing Boats)		(C) Maintenance Cost		3%			
										12.8 (Rp. mile/ton/year)	
Procurement Cost	Accumulated Cost	Existing Boats Total Tonnage	Cost Amount (Rp. Million)	New Boats Total Tonnage	Cost Amount (Rp. Million)	Total Op. Cost Amount (Rp. Million)	Existing Boat Total of Proc. Cost Equivalent (Rp. Million)	New Boat Accumulated Proc. Cost (Rp. Million)	Total Accumulated Proc. Cost (Rp. Million)	Total Maintenance Cost Amount (Rp. Million)	Total O/M Cost Amount (Rp. Million)
3,025	3,025	347	108	500	311	419	2,099	3,025	5,124	154	573
0	3,025	347	108	500	311	419	2,099	3,025	5,124	154	573
3,025	6,050	347	108	1,000	622	790	2,099	6,050	8,149	244	974
0	6,050	148	46	1,000	622	668	895	6,050	6,945	208	876
0	6,050	148	46	1,000	622	668	895	6,050	6,945	208	876
0	6,050	148	46	1,000	622	668	895	6,050	6,945	208	876
0	6,050	148	46	1,000	622	668	895	6,050	6,945	208	876
0	6,050	148	46	1,000	622	668	895	6,050	6,945	208	876
0	6,050	148	46	1,000	622	668	895	6,050	6,945	208	876
0	6,050	148	46	1,000	622	668	895	6,050	6,945	208	876
3,025	9,075	148	46	1,500	933	979	895	9,075	9,970	289	1,278
0	9,075	148	46	1,500	933	979	895	9,075	9,970	289	1,278
0	9,075	0	0	1,500	933	933	0	9,075	9,075	272	1,205
0	9,075	0	0	1,500	933	933	0	9,075	9,075	272	1,205
0	9,075	0	0	1,500	933	933	0	9,075	9,075	272	1,205
0	9,075	0	0	1,500	933	933	0	9,075	9,075	272	1,205
3,025	12,100	0	0	2,000	1,245	1,245	0	12,100	12,100	363	1,608
0	12,100	0	0	2,000	1,245	1,245	0	12,100	12,100	363	1,608
0	12,100	0	0	2,000	1,245	1,245	0	12,100	12,100	363	1,608
0	12,100	0	0	2,000	1,245	1,245	0	12,100	12,100	363	1,608
0	12,100	0	0	2,000	1,245	1,245	0	12,100	12,100	363	1,608
3,025	15,125	0	0	2,500	1,556	1,556	0	15,125	15,125	454	2,010
0	15,125	0	0	2,500	1,556	1,556	0	15,125	15,125	454	2,010
0	15,125	0	0	2,500	1,556	1,556	0	15,125	15,125	454	2,010
0	15,125	0	0	2,500	1,556	1,556	0	15,125	15,125	454	2,010
0	15,125	0	0	2,500	1,556	1,556	0	15,125	15,125	454	2,010
0	15,125	0	0	2,500	1,556	1,556	0	15,125	15,125	454	2,010
0	15,125	0	0	2,500	1,556	1,556	0	15,125	15,125	454	2,010
0	15,125	0	0	2,500	1,556	1,556	0	15,125	15,125	454	2,010

Table 9-4-31(1)A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (Without) (Route 9-1)

Assumption: Unit Procurement Cost of Boats per ton = 6.05 Rp. Million/ton

Ferry Boats		Substituted Boats										
Year	(1) Existing Boats		(2) Bangka Raya		(3) Mersi Raya		Year	Number	Tonnage (Existing Type) (Unit) 199	Tonnage (L.CM Type) (Unit) 199	Accumulated Tonnage (Existing Type)	Accumulated Tonnage (L.CM Type)
	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)	Tonnage	Assumed Proc. Cost (Rp. Million)						
1	1998	148	895	198	1,198		1998	8	1,592		1,592	1,592
2	1999	148	895	198	1,198		1999	0	0		1,592	1,592
3	2000	148	895	198	1,198		2000	0	0		1,592	1,592
4	2001	148	895	198	1,198		2001	2	388		1,990	1,990
5	2002	148	895	198	1,198		2002	0	0		1,990	1,990
6	2003	148	895	198	1,198		2003	1	199		2,189	2,189
7	2004	148	895	198	1,198		2004	0	0		2,189	2,189
8	2005	148	895	198	1,198		2005	1	199		2,388	2,388
9	2006	148	895	198	1,198		2006	0	0		2,388	2,388
10	2007	148	895	198	1,198		2007	1	199		2,587	2,587
11	2008	148	895	198	1,198		2008	0	0		2,587	2,587
12	2009	148	895	198	1,198		2009	1	199		2,786	2,786
13	2010	148	895	198	1,198		2010	1	199		2,985	2,985
14	2011	148	895	198	1,198		2011	1	199		3,184	3,184
15	2012	148	895	198	1,198		2012	1	199		3,383	3,383
16	2013	148	895	198	1,198		2013	0	0		3,383	3,383
17	2014	148	895	198	1,198		2014	1	199		3,582	3,582
18	2015	148	895	198	1,198		2015	1	199		3,781	3,781
19	2016	148	895	198	1,198		2016	1	199		3,980	3,980
20	2017	148	895	198	1,198		2017	0	0		3,980	3,980
21	2018	148	895	198	1,198		2018	1	199	199	3,980	3,980
22	2019	148	895	198	1,198		2019	1	199	199	3,980	3,980
23	2020	148	895	198	1,198		2020	1	199	199	3,980	3,980
24	2021	148	895	198	1,198		2021	1	199	199	3,980	3,980
25	2022	148	895	198	1,198		2022	1	199	199	3,980	3,980
26	2023	148	895	198	1,198		2023	1	199	199	3,980	3,980
27	2024	148	895	198	1,198		2024	1	199	199	3,980	3,980
28	2025	148	895	198	1,198		2025	1	199	199	3,980	3,980
29	2026	148	895	198	1,198		2026	1	199	199	3,980	3,980
30	2027	148	895	198	1,198		2027	2	398	398	3,980	2,189

Table 9-4-31(2)A Ferry Boats Procurement Costs, Operation Cost and Maintenance Cost (Without) (Route 9-1)

(A) Substitution Cost of Boats (Existing Type + LCM Type)		(B) Operation Cost		Substituted Boats (Existing Type)		Substituted Boats (LCM Type)		Substituted Boats (Total)		Cost Factor for LCM Type		(C) Maintenance Cost		3%	
Substitution Cost	Accumulated Cost	Existing Boats Total Tonnage	Cost Amount (Rp. Million)	Substituted Boats Total Tonnage	Cost Amount (Rp. Million)	Substituted Boats Total Tonnage	Cost Amount (Rp. Million)	Op. Cost Amount (Rp. Million)	Total Amount (Rp. Million)	Cost Factor for LCM Type	Existing Boats Total of Proc. Cost Equivalent (Rp. Million)	Substituted (Existing Type + LCM Type) Accumulated Proc. Cost (Rp. Million)	Total Accumulated Proc. Cost (Rp. Million)	Total Maintenance Cost Amount (Rp. Million)	Total O&M Cost Amount (Rp. Million)
9,632	9,632	346	1,592	736.3	0	0	0	896	896	2.093	2,093	9,632	11,725	352	1,248
0	9,632	346	1,592	736.3	0	0	0	896	896	2,093	2,093	9,632	11,725	352	1,248
0	9,632	346	1,592	736.3	0	0	0	896	896	2,093	2,093	9,632	11,725	352	1,248
2,408	12,040	148	1,990	920.4	0	0	0	989	989	895	895	12,040	12,935	388	1,377
0	12,040	148	1,990	920.4	0	0	0	989	989	895	895	12,040	12,935	388	1,377
1,204	13,243	148	2,189	1,012.5	0	0	0	1,081	1,081	895	895	13,243	14,139	424	1,505
0	13,243	148	2,189	1,012.5	0	0	0	1,081	1,081	895	895	13,243	14,139	424	1,505
1,204	14,447	148	2,388	1,104.5	0	0	0	1,173	1,173	895	895	14,447	15,343	480	1,633
0	14,447	148	2,388	1,104.5	0	0	0	1,173	1,173	895	895	14,447	15,343	480	1,633
1,204	15,651	148	2,587	1,196.6	0	0	0	1,265	1,265	895	895	15,651	16,547	496	1,761
0	15,651	148	2,587	1,196.6	0	0	0	1,265	1,265	895	895	15,651	16,547	496	1,761
1,204	16,855	148	2,786	1,288.6	0	0	0	1,357	1,357	895	895	16,855	17,751	533	1,890
0	16,855	148	2,786	1,288.6	0	0	0	1,357	1,357	895	895	16,855	17,751	533	1,890
1,204	18,059	0	3,184	1,472.7	0	0	0	1,381	1,381	0	0	18,059	19,263	578	2,051
0	18,059	0	3,184	1,472.7	0	0	0	1,381	1,381	0	0	18,059	19,263	578	2,051
1,204	20,467	0	3,383	1,564.7	0	0	0	1,565	1,565	0	0	20,467	20,467	614	2,179
0	20,467	0	3,383	1,564.7	0	0	0	1,565	1,565	0	0	20,467	20,467	614	2,179
1,204	21,671	0	3,582	1,656.8	0	0	0	1,657	1,657	0	0	21,671	21,671	650	2,307
0	21,671	0	3,582	1,656.8	0	0	0	1,657	1,657	0	0	21,671	21,671	650	2,307
1,204	22,875	0	3,781	1,748.8	0	0	0	1,749	1,749	0	0	22,875	22,875	686	2,435
0	22,875	0	3,781	1,748.8	0	0	0	1,749	1,749	0	0	22,875	22,875	686	2,435
1,204	24,079	0	3,980	1,840.9	0	0	0	1,841	1,841	0	0	24,079	24,079	722	2,563
0	24,079	0	3,980	1,840.9	0	0	0	1,841	1,841	0	0	24,079	24,079	722	2,563
1,204	25,283	0	3,980	1,840.9	199	184.1	0	1,841	1,841	199	184.1	25,283	25,283	758	2,763
0	25,283	0	3,980	1,840.9	199	184.1	0	1,841	1,841	199	184.1	25,283	25,283	758	2,763
1,204	26,487	0	3,980	1,840.9	398	368.2	0	2,209	2,209	398	368.2	26,487	26,487	795	3,004
0	26,487	0	3,980	1,840.9	398	368.2	0	2,209	2,209	398	368.2	26,487	26,487	795	3,004
1,204	27,691	0	3,980	1,840.9	597	552.3	0	2,393	2,393	597	552.3	27,691	27,691	831	3,224
0	27,691	0	3,980	1,840.9	597	552.3	0	2,393	2,393	597	552.3	27,691	27,691	831	3,224
1,204	28,895	0	3,980	1,840.9	796	736.3	0	2,577	2,577	796	736.3	28,895	28,895	867	3,444
0	28,895	0	3,980	1,840.9	796	736.3	0	2,577	2,577	796	736.3	28,895	28,895	867	3,444
1,204	30,099	0	3,980	1,840.9	995	920.4	0	2,761	2,761	995	920.4	30,099	30,099	903	3,664
0	30,099	0	3,980	1,840.9	995	920.4	0	2,761	2,761	995	920.4	30,099	30,099	903	3,664
1,204	31,303	0	3,980	1,840.9	1,194	1,104.5	0	2,945	2,945	1,194	1,104.5	31,303	31,303	939	3,884
0	31,303	0	3,980	1,840.9	1,194	1,104.5	0	2,945	2,945	1,194	1,104.5	31,303	31,303	939	3,884
1,204	32,507	0	3,980	1,840.9	1,393	1,288.6	0	3,130	3,130	1,393	1,288.6	32,507	32,507	975	4,105
0	32,507	0	3,980	1,840.9	1,393	1,288.6	0	3,130	3,130	1,393	1,288.6	32,507	32,507	975	4,105
1,204	33,711	0	3,980	1,840.9	1,592	1,472.7	0	3,314	3,314	1,592	1,472.7	33,711	33,711	1,011	4,325
0	33,711	0	3,980	1,840.9	1,592	1,472.7	0	3,314	3,314	1,592	1,472.7	33,711	33,711	1,011	4,325
1,204	34,915	0	3,980	1,840.9	1,791	1,656.8	0	3,498	3,498	1,791	1,656.8	34,915	34,915	1,047	4,545
0	34,915	0	3,980	1,840.9	1,791	1,656.8	0	3,498	3,498	1,791	1,656.8	34,915	34,915	1,047	4,545
2,408	37,322	0	3,980	1,840.9	2,189	2,024.9	0	3,865	3,865	2,189	2,024.9	37,322	37,322	1,207	4,896
0	37,322	0	3,980	1,840.9	2,189	2,024.9	0	3,865	3,865	2,189	2,024.9	37,322	37,322	1,207	4,896

Table 9-4-32(1)A Estimation of Time Cost Saving Benefits (Route 9-1)

		Assumption: Unit Time Cost per Passenger (hour) = 371 (Rp./hour)					
(1) Time Cost for Without Case		(a) Passengers Palembang - Kayu Arang		(b) Passengers Kayu Arang - Pangkajene		(c) Without Time Cost Total	
		Passengers	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	Passengers	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)
1	1998	189,484	12	843,583	189,484	1.6	112,478
2	1999	198,714	12	884,675	198,714	1.6	117,957
3	2000	208,394	12	927,770	208,394	1.6	123,703
4	2001	217,692	12	969,165	217,692	1.6	129,222
5	2002	227,404	12	1,012,403	227,404	1.6	134,987
6	2003	237,550	12	1,057,573	237,550	1.6	141,010
7	2004	248,148	12	1,104,755	248,148	1.6	147,301
8	2005	259,220	12	1,154,047	259,220	1.6	153,873
9	2006	270,121	12	1,202,579	270,121	1.6	160,344
10	2007	281,480	12	1,253,149	281,480	1.6	167,087
11	2008	293,318	12	1,305,852	293,318	1.6	174,114
12	2009	305,653	12	1,360,767	305,653	1.6	181,436
13	2010	318,507	12	1,417,993	318,507	1.6	189,066
14	2011	331,901	12	1,477,623	331,901	1.6	197,016
15	2012	345,859	12	1,539,764	345,859	1.6	205,302
16	2013	360,403	12	1,604,514	360,403	1.6	213,935
17	2014	375,559	12	1,671,989	375,559	1.6	222,982
18	2015	391,353	12	1,742,304	391,353	1.6	232,307
19	2016	407,811	12	1,815,575	407,811	1.6	242,077
20	2017	424,961	12	1,891,926	424,961	1.6	252,257
21	2018	442,832	12	1,971,488	442,832	1.6	262,865
22	2019	461,455	12	2,054,398	461,455	1.6	273,920
23	2020	480,861	12	2,140,793	480,861	1.6	285,439
24	2021	501,082	12	2,230,817	501,082	1.6	297,442
25	2022	522,155	12	2,324,634	522,155	1.6	309,951
26	2023	544,113	12	2,422,391	544,113	1.6	322,985
27	2024	566,995	12	2,524,262	566,995	1.6	336,568
28	2025	590,840	12	2,630,420	590,840	1.6	350,723
29	2026	615,687	12	2,741,039	615,687	1.6	365,472
30	2027	641,578	12	2,856,305	641,578	1.6	380,841
							956,061
							1,002,632
							1,051,473
							1,098,387
							1,147,390
							1,198,583
							1,252,056
							1,307,920
							1,362,923
							1,420,236
							1,479,966
							1,542,203
							1,607,059
							1,674,639
							1,745,066
							1,818,449
							1,894,921
							1,974,611
							2,057,662
							2,144,183
							2,234,353
							2,328,318
							2,426,232
							2,528,259
							2,634,585
							2,745,376
							2,860,830
							2,981,143
							3,106,511
							3,237,146

Table 9-4-32(2)A Estimation of Time Cost Saving Benefits (Route 9-1)

(2) Time Cost for With Case										
(a) Related to Passengers Using Existing B (b) Related to Passengers Using New Boat (c) Passengers Muntok - Pangkal Pinang										
Passengers Using Existing Boats	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	Passengers Using New Boats	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	Passengers	Travel Hours Required (hours)	Estimated Time Cost (Rp. 1,000)	(d) With Time Total	Time Cost Saving Benefits
										Time Cost Saving Benefits (Rp. 1,000)
8	6.5	8	2.8	2.8	2.8					
32,212	95,605	157,272	379,261	189,484	196,836	671,702	284,359	284	1998	
33,781	100,262	164,933	397,736	198,714	206,424	704,422	298,210	298	1999	
18,755	55,665	189,639	457,314	208,394	216,480	729,459	322,014	322	2000	
8,708	25,845	208,984	503,965	217,692	226,138	755,948	342,439	342	2001	
9,096	26,997	218,308	526,450	227,404	236,227	789,674	357,716	358	2002	
9,502	28,202	228,048	549,938	237,550	246,767	824,907	373,676	374	2003	
10,369	29,460	238,222	574,472	248,148	257,776	861,708	390,348	390	2004	
10,805	30,775	248,551	600,104	259,220	268,278	900,157	407,763	408	2005	
11,259	32,069	259,316	625,341	270,121	280,602	938,012	424,911	425	2006	
8,800	33,417	270,221	651,638	281,480	292,401	977,456	442,780	443	2007	
9,170	26,118	284,518	686,115	293,318	304,699	1,016,932	463,034	463	2008	
0	27,217	296,483	714,969	305,653	317,512	1,059,698	482,505	483	2009	
0	0	318,507	768,080	318,507	330,865	1,098,945	508,114	508	2010	
0	0	331,901	800,379	331,901	344,779	1,145,158	529,481	529	2011	
0	0	345,659	834,039	345,659	359,278	1,193,317	551,749	552	2012	
0	0	360,403	869,112	360,403	374,387	1,243,499	574,950	575	2013	
0	0	375,559	905,661	375,559	390,131	1,295,792	599,129	599	2014	
0	0	391,353	943,748	391,353	406,537	1,350,285	624,326	624	2015	
0	0	407,811	983,436	407,811	423,634	1,407,070	650,582	651	2016	
0	0	424,961	1,024,793	424,961	441,449	1,466,242	677,941	678	2017	
0	0	442,832	1,067,899	442,832	460,014	1,527,903	706,450	706	2018	
0	0	461,455	1,112,799	461,455	479,359	1,592,158	736,160	736	2019	
0	0	480,861	1,159,596	480,861	499,518	1,659,114	767,118	767	2020	
0	0	501,082	1,208,359	501,082	520,524	1,728,883	799,376	799	2021	
0	0	522,155	1,259,177	522,155	542,415	1,801,592	832,993	833	2022	
0	0	544,113	1,312,128	544,113	565,225	1,877,353	868,023	868	2023	
0	0	566,995	1,367,308	566,995	588,994	1,956,302	904,528	905	2024	
0	0	590,840	1,424,811	590,840	613,765	2,038,576	942,567	943	2025	
0	0	615,687	1,484,729	615,687	639,576	2,124,305	982,206	982	2026	
0	0	641,578	1,547,165	641,578	666,471	2,213,636	1,023,510	1,024	2027	

Table 9-4-33A Estimation of Vehicle Operating Cost (VOC) Saving Benefits (Route 9-1)

Assumption: (1) Difference of Road Distance of Section Muntok - Pangkal Pinang and Section Kayu Arang - Pangk		-60 (Km)						
(2) Unit VOC:		(50Km/h)	(50Km/h)					
3 ton Truck	341	293 (Rp./Km)	(3) Speed =					
8 ton Truck	425	378	50 km/h					
Sedan	340	291						
Bus	433	383						
Vehicle Operating Cost Saving Benefits (Rp. 1,000)								
Year	Truck (3 ton truck)	Sedan	Bus	Truck (3 ton truck)	Sedan	Bus	Total	(Rp. Million)
1	10,151	5,469	4,327	293	291	383	-373	1988
2	10,739	5,839	4,530	-178,455	-95,489	-99,434	-378,378	1989
3	11,360	6,234	4,742	-188,792	-101,949	-104,059	-384,840	1999
4	11,971	6,630	4,945	-199,709	-108,846	-108,971	-417,526	2000
5	12,614	7,051	5,156	-210,450	-115,760	-113,636	-429,846	2001
6	13,292	7,499	5,376	-221,754	-123,110	-118,485	-463,349	2002
7	14,007	7,976	5,606	-233,673	-130,933	-123,540	-488,146	2003
8	14,760	8,483	5,844	-246,243	-139,261	-128,826	-514,330	2004
9	15,515	9,000	6,078	-259,481	-148,113	-134,295	-541,889	2005
10	16,309	9,548	6,321	-272,754	-157,140	-139,672	-569,566	2006
11	17,143	10,130	6,573	-286,712	-166,708	-145,257	-598,677	2007
12	18,020	10,747	6,835	-301,374	-176,870	-151,048	-629,292	2008
13	18,942	11,401	7,108	-316,792	-187,643	-157,068	-661,503	2009
14	19,911	12,096	7,390	-333,000	-199,061	-163,342	-695,403	2010
15	20,930	12,833	7,684	-350,035	-211,196	-169,822	-731,053	2011
16	22,001	13,615	7,989	-367,949	-224,084	-176,578	-768,591	2012
17	23,126	14,444	8,306	-386,778	-237,718	-183,587	-808,083	2013
18	24,310	15,325	8,634	-406,555	-252,192	-190,872	-849,619	2014
19	25,554	16,258	8,976	-427,370	-267,575	-198,409	-893,354	2015
20	26,861	17,249	9,330	-449,239	-283,865	-206,268	-939,372	2016
21	28,235	18,300	9,698	-472,216	-301,168	-214,403	-987,787	2017
22	29,680	19,415	10,080	-496,371	-319,518	-222,860	-1,038,749	2018
23	31,198	20,597	10,477	-521,774	-338,986	-231,638	-1,092,398	2019
24	32,795	21,852	10,888	-548,461	-359,624	-240,761	-1,148,846	2020
25	34,473	23,184	11,315	-576,556	-381,536	-250,206	-1,208,278	2021
26	35,746	24,260	11,783	-606,055	-404,793	-260,019	-1,270,847	2022
27	35,746	24,260	12,355	-628,415	-423,580	-270,773	-1,322,768	2023
28	35,746	24,260	12,952	-628,415	-423,580	-283,918	-1,335,913	2024
29	35,746	24,260	13,573	-628,415	-423,580	-297,637	-1,349,632	2025
30	35,746	24,260	14,220	-628,415	-423,580	-311,908	-1,363,903	2026
								2027



Table 9-4-34A Economic Analysis for Route 9-1, Palembang-Muntok Route

EIRR = 10.9%  
 NPV = 935 (Million Rp.)  
 B/C = 1.03 (Discount Rate Used = 10%)

(Unit: Rp. Million)

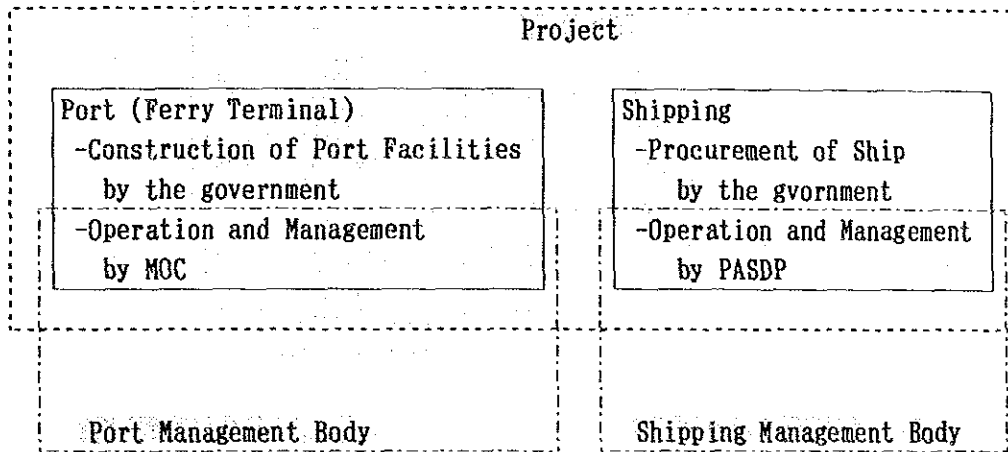
Year	Benefits										Costs										Year
	(Users Benefit)		Vehicles		(Invest. & O/M Costs Saving Benefit)		(Without Costs)		Total		Terminal		Ferry Boats		Total		With		Net		
	Passengers	Time	Saving	VOC	Substituted	Maint. of	Total	Terminal	Facilities	O/M Costs	Procurement	Total	O/M Costs	Procurement	Total	O/M Costs	Procurement	Total	Cash	Flow	
1	1995																				
2	1996																				
3	1997																				
4	1998	284		-373	156	9,632	1,248	3,538	386	11,422	11,333	196	196	3,025	573	3,598	0	653	9,473	-653	1995
5	1999	298		-395	156	0	1,248	386	1,633	1,790	1,633	196	196	196	0	573	769	0	7,357	-9,473	1996
6	2000	322		-418	156	0	1,248	386	1,633	1,790	1,633	196	196	3,025	573	3,998	0	3,794	7,539	-3,819	1997
7	2001	342		-440	156	2,408	1,377	386	4,327	4,229	1,96	196	196	3,025	974	3,998	0	4,195	7,539	7,539	1998
8	2002	358		-463	156	0	1,377	386	1,919	1,814	1,96	196	196	0	876	876	0	1,072	3,157	-2,501	2000
9	2003	374		-488	156	1,204	1,505	386	3,251	3,137	1,96	196	196	0	876	876	0	1,072	742	742	2002
10	2004	390		-514	156	0	1,505	386	2,047	1,923	1,96	196	196	0	876	876	0	1,072	2,065	2,065	2003
11	2005	408		-542	156	1,204	1,633	386	3,379	3,245	1,96	196	196	0	876	876	0	1,072	2,179	2,179	2005
12	2006	425		-570	156	0	1,633	386	2,175	2,030	211	211	211	0	876	876	0	1,087	943	943	2006
13	2007	443		-599	156	1,204	1,761	386	3,507	3,351	945	211	1,156	0	876	876	0	2,032	1,319	1,319	2007
14	2008	463		-629	156	0	1,761	386	2,303	2,137	211	211	211	3,025	1,278	4,303	0	4,514	-2,377	-2,377	2008
15	2009	483		-662	156	1,204	1,890	386	3,636	3,457	211	211	211	0	1,278	1,278	0	1,489	1,968	1,968	2009
16	2010	508		-695	156	1,204	1,923	386	3,669	3,482	211	211	211	0	1,205	1,205	0	1,416	2,065	2,065	2010
17	2011	529		-731	156	1,204	2,051	386	3,797	3,595	211	211	211	0	1,205	1,205	0	1,416	2,179	2,179	2011
18	2012	552		-769	156	1,204	2,179	386	3,925	3,708	211	211	211	0	1,205	1,205	0	1,416	2,292	2,292	2012
19	2013	575		-808	156	0	2,179	386	2,721	2,488	211	211	211	0	1,205	1,205	0	1,416	1,072	1,072	2013
20	2014	599		-850	156	1,204	2,307	386	4,053	3,802	224	224	224	3,025	1,608	4,633	0	4,657	-1,055	-1,055	2014
21	2015	624		-893	156	1,204	2,435	386	4,181	3,912	224	224	224	0	1,608	1,608	0	1,832	2,080	2,080	2015
22	2016	651		-939	156	1,204	2,563	386	4,308	4,021	224	224	224	0	1,608	1,608	0	1,832	2,189	2,189	2016
23	2017	678		-988	156	0	2,563	386	3,105	2,795	945	224	1,169	0	1,608	1,608	0	2,777	18	18	2017
24	2018	706		-1,039	156	1,204	2,783	386	4,529	4,196	224	224	224	0	1,608	1,608	0	1,832	2,364	2,364	2018
25	2019	736		-1,092	156	1,204	3,004	386	4,750	4,394	240	240	240	3,025	2,010	5,035	0	5,275	-881	-881	2019
26	2020	767		-1,149	156	1,204	3,224	386	4,970	4,598	240	240	240	0	2,010	2,010	0	2,250	2,338	2,338	2020
27	2021	799		-1,208	156	1,204	3,444	386	5,190	4,781	240	240	240	0	2,010	2,010	0	2,250	2,531	2,531	2021
28	2022	833		-1,271	156	1,204	3,664	386	5,410	4,972	240	240	2,774	0	2,010	2,010	0	4,764	188	188	2022
29	2023	868		-1,323	156	1,204	3,884	386	5,630	5,175	240	240	240	0	2,010	2,010	0	2,250	2,325	2,325	2023
30	2024	905		-1,386	156	1,204	4,105	386	5,850	5,390	240	240	240	0	2,010	2,010	0	2,250	3,169	3,169	2024
31	2025	943		-1,350	156	1,204	4,325	386	6,071	5,664	240	240	240	0	2,010	2,010	0	2,250	3,414	3,414	2025
32	2026	982		-1,364	156	1,204	4,545	386	6,291	5,909	240	240	240	0	2,010	2,010	0	2,250	3,659	3,659	2026
33	2027	1,024		-1,379	156	2,408	4,886	386	7,395	7,581	240	240	240	0	2,010	2,010	0	2,250	5,231	5,231	2027

Project.....Short-term Development Plan, Object of Loan

FIRR.....Financial Internal Rate of Return  
Analysis for viability of the project

Financial Statements.....Profit & Loss Statement, Cash Flow Statement,  
Balance Sheet  
Analysis for financial soundness of management body

Case-1



Case-2

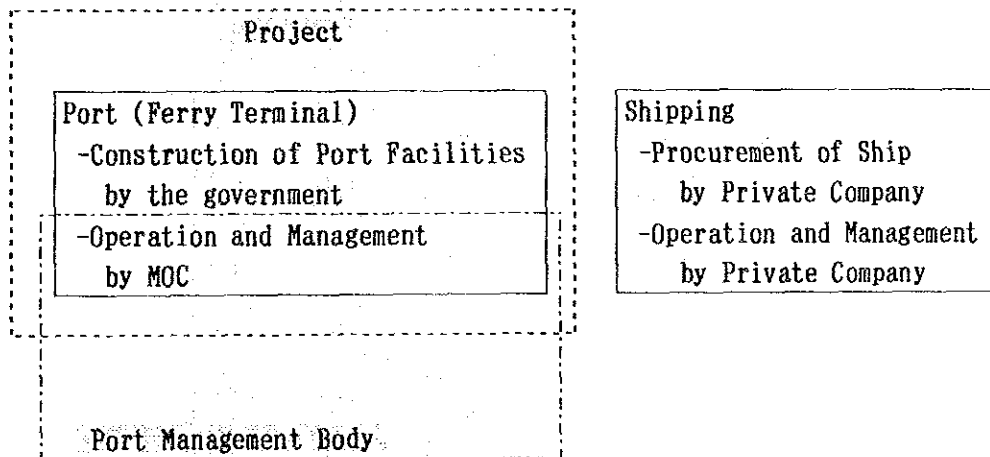


Fig.10-3-1A Scope of Financial Analysis

Table 10-3-1A Traffic Volume at Mokmer or Saubeba Terminal

(Unit: Person, Vehicle, Ton)

Year	Passenger	Truck	Sedan	2 Wheelod	Cargo
1998	33,488	685	947	1,508	1,438
1999	36,127	741	1,037	1,650	1,556
2000	38,976	803	1,136	1,807	1,685
2001	41,835	866	1,236	1,968	1,817
2002	44,905	934	1,349	2,144	1,960
2003	48,200	1,007	1,471	2,336	2,114
2004	51,737	1,086	1,603	2,544	2,280
2005	55,634	1,171	1,747	2,772	2,459
2006	59,271	1,258	1,894	3,002	2,641
2007	63,258	1,351	2,052	3,252	2,836
2008	67,515	1,451	2,224	3,522	3,046
2009	72,057	1,558	2,410	3,815	3,271
2010	76,905	1,673	2,612	4,132	3,513
2011	82,079	1,796	2,831	4,475	3,772
2012	87,602	1,929	3,068	4,847	4,051
2013	93,496	2,072	3,325	5,250	4,351
2014	99,786	2,225	3,604	5,687	4,672
2015	106,500	2,389	3,906	6,160	5,018
2016	113,665	2,566	4,233	6,672	5,389
2017	121,313	2,756	4,587	7,227	5,787
2018	129,475	2,959	4,971	7,827	6,215
2019	138,186	3,178	5,388	8,478	6,674
2020	147,483	3,414	5,839	9,183	7,167
2021	157,406	3,665	6,328	9,946	7,697
2022	167,997	3,936	6,858	10,773	8,266
2023	179,300	4,227	7,433	11,669	8,877
2024	191,363	4,540	8,055	12,639	9,533
2025	204,238	4,875	8,730	13,690	10,238
2026	217,980	5,236	9,461	14,828	10,995
2027	232,846	5,623	10,254	16,061	11,808

Source: JICA Study Team

Table 10-3-2A Traffic Volume at Terong Terminal

(Unit: Person, Vehicle, Ton)

Year	Passenger	Truck	Sedan	2 Wheelod	Cargo
1998	30,850	848	933	1,126	1,780
1999	33,058	919	1,024	1,235	1,930
2000	35,425	997	1,124	1,356	2,093
2001	37,816	1,077	1,229	1,482	2,262
2002	40,368	1,184	1,343	1,620	2,444
2003	43,092	1,258	1,468	1,771	2,642
2004	46,001	1,360	1,605	1,936	2,858
2005	49,106	1,470	1,755	2,116	3,086
2006	52,290	1,585	1,914	2,307	3,329
2007	55,681	1,710	2,087	2,516	3,591
2008	59,292	1,845	2,276	2,743	3,874
2009	63,138	1,990	2,482	2,991	4,179
2010	67,233	2,147	2,706	3,261	4,507
2011	71,593	2,315	2,951	3,556	4,862
2012	76,236	2,498	3,218	3,878	5,245
2013	81,181	2,694	3,509	4,228	5,657
2014	86,448	2,906	3,827	4,610	6,103
2015	92,054	3,135	4,174	5,027	6,583
2016	98,024	3,381	4,551	5,481	7,101
2017	104,383	3,648	4,963	5,976	7,660
2018	111,154	3,935	5,412	6,516	8,262
2019	118,260	4,142	5,897	7,105	8,898
2020	118,260	4,142	5,897	7,105	8,898
2021	118,260	4,142	5,897	7,105	8,898
2022	118,260	4,142	5,897	7,105	8,898
2023	118,260	4,142	5,897	7,105	8,898
2024	118,260	4,142	5,897	7,105	8,898
2025	118,260	4,142	5,897	7,105	8,898
2026	118,260	4,142	5,897	7,105	8,898
2027	118,260	4,142	5,897	7,105	8,898

Source: JICA Study Team

Table 10-3-3A Traffic Volume at Lewoleba Terminal

Year	(Unit: Person, Vehicle, Ton)				
	Passenger	Truck	Sedan	2 Wheeled	Cargo
1998	31,059	811	940	1,130	1,704
1999	33,282	874	1,031	1,240	1,835
2000	35,664	942	1,132	1,360	1,977
2001	38,071	1,011	1,237	1,487	2,124
2002	40,640	1,086	1,352	1,626	2,281
2003	43,382	1,167	1,478	1,777	2,450
2004	46,310	1,254	1,616	1,942	2,632
2005	49,435	1,347	1,767	2,123	2,828
2006	52,640	1,444	1,928	2,315	3,032
2007	56,054	1,548	2,101	2,524	3,251
2008	59,688	1,660	2,291	2,752	3,486
2009	63,559	1,780	2,498	3,001	3,738
2010	67,680	1,909	2,724	3,272	4,008
2011	72,069	2,047	2,971	3,568	4,298
2012	76,743	2,195	3,240	3,890	4,610
2013	81,719	2,354	3,533	4,242	4,944
2014	87,019	2,525	3,852	4,625	5,302
2015	92,662	2,708	4,201	5,043	5,687
2016	98,672	2,905	4,581	5,499	6,099
2017	105,071	3,116	4,996	5,996	6,542
2018	111,885	3,342	5,448	6,538	7,018
2019	118,260	3,585	5,941	7,128	7,528
2020	118,260	3,772	6,251	7,773	7,921
2021	118,260	3,772	6,251	7,773	7,921
2022	118,260	3,772	6,251	7,773	7,921
2023	118,260	3,772	6,251	7,773	7,921
2024	118,260	3,772	6,251	7,773	7,921
2025	118,260	3,772	6,251	7,773	7,921
2026	118,260	3,772	6,251	7,773	7,921
2027	118,260	3,772	6,251	7,773	7,921

Source: JICA Study Team

Table 10-3-4A Traffic Volume at Bajoe or Kolaka Terminal

Year	(Unit: Person, Vehicle, Ton)				
	Passenger	Truck	Sedan	2 Wheeled	Cargo
1996	260,860	6,920	7,310	4,366	41,519
1999	278,996	7,499	7,930	4,734	44,990
2000	298,391	8,125	8,603	5,132	48,752
2001	317,897	8,771	9,297	5,543	52,622
2002	338,678	9,467	10,047	5,987	56,800
2003	360,817	10,219	10,857	6,466	61,310
2004	384,404	11,030	11,733	6,984	66,177
2005	409,532	11,905	12,680	7,543	71,432
2006	434,816	12,807	13,656	8,119	76,840
2007	461,660	13,777	14,707	8,739	82,658
2008	490,163	14,820	15,839	9,406	88,917
2009	520,424	15,942	17,058	10,124	95,649
2010	552,554	17,149	18,371	10,897	102,891
2011	586,668	18,447	19,786	11,728	110,682
2012	591,300	19,107	20,883	12,625	114,642
2013	591,300	19,107	20,883	12,625	114,642
2014	591,300	19,107	20,883	12,625	114,642
2015	591,300	19,107	20,883	12,625	114,642
2016	591,300	19,107	20,883	12,625	114,642
2017	591,300	19,107	20,883	12,625	114,642
2018	591,300	19,107	20,883	12,625	114,642
2019	591,300	19,107	20,883	12,625	114,642
2020	591,300	19,107	20,883	12,625	114,642
2021	591,300	19,107	20,883	12,625	114,642
2022	591,300	19,107	20,883	12,625	114,642
2023	591,300	19,107	20,883	12,625	114,642
2024	591,300	19,107	20,883	12,625	114,642
2025	591,300	19,107	20,883	12,625	114,642
2026	591,300	19,107	20,883	12,625	114,642
2027	591,300	19,107	20,883	12,625	114,642

Source: JICA Study Team

Table 10-3-5A Traffic Volume at Palembang or Muntok Terminal

(Unit: Person, Vehicle, Ton)

Year	Passenger	Truck	Sedan	2 Wheelled	Cargo
1998	94,742	5,076	2,735	4,355	10,659
1999	99,357	5,370	2,920	4,647	11,276
2000	104,197	5,680	3,117	4,959	11,929
2001	108,846	5,986	3,315	5,271	12,570
2002	113,702	6,307	3,526	5,603	13,245
2003	118,775	6,646	3,750	5,955	13,957
2004	124,074	7,004	3,988	6,330	14,707
2005	129,610	7,380	4,242	6,728	15,498
2006	135,061	7,758	4,500	7,134	16,291
2007	140,740	8,155	4,774	7,564	17,124
2008	146,659	8,572	5,065	8,021	18,000
2009	152,827	9,010	5,374	8,504	18,921
2010	159,254	9,471	5,701	9,017	19,889
2011	165,951	9,956	6,048	9,561	20,907
2012	172,930	10,465	6,417	10,138	21,977
2013	180,202	11,001	6,808	10,749	23,101
2014	187,780	11,563	7,222	11,398	24,283
2015	195,677	12,155	7,663	12,085	25,525
2016	203,906	12,777	8,129	12,814	26,831
2017	212,481	13,431	8,625	13,587	28,204
2018	221,416	14,118	9,150	14,407	29,647
2019	230,728	14,840	9,708	15,276	31,164
2020	240,431	15,599	10,299	16,197	32,769
2021	250,541	16,398	10,926	17,174	34,435
2022	261,078	17,237	11,592	18,210	36,196
2023	272,057	18,049	12,139	19,308	37,903
2024	283,498	18,049	12,139	19,308	37,903
2025	295,420	18,049	12,139	19,308	37,903
2026	307,844	18,049	12,139	19,308	37,903
2027	320,769	18,049	12,139	19,308	37,903

Source: JICA Study Team

Table 10-3-6A Port Terminal Tariff

ITKM	TARIFF	
<b>Mooring</b>		
Steel Bridge	Rp. 56	/hrs/m(ship length)
Pontoon Bridge	Rp. 55	/hrs/m(ship length)
Concrete Bridge	Rp. 54	/hrs/m(ship length)
Log Bridge	Rp. 38	/hrs/m(ship length)
Beach Edges/Platform	Rp. 11	/hrs/m(ship length)
<b>Port Pass</b>		
Port Entry Pass	Rp. 100	/person/entry
Employees of Companies	Rp. 500	/peerson/month
Terminal Building Pass (Not for Passengers)	Rp. 100	/person/entry
Monthly Pass for 4 Wheeled Vehicles operated in port	Rp. 2,500	/vehicle/month
<b>Pier Maintenance</b>		
Motorcycle	Rp. 50	
3 Wheeled Vehicles	Rp. 100	
Empty 4 Wheeled Small Veh.	Rp. 150	
Empty Buses/Trucks	Rp. 200	
Empty Connected Truck	Rp. 250	
Empty Trailer Truck	Rp. 250	
Heavy Equipments		
Rubber Wheeled	Rp. 4,200	
Steel Wheeled	Rp. 10,000	
<b>Cargo</b>		
9 Staple Supplies	Rp. 25	/ton
Other Goods	Rp. 75	/ton
Fuel, Coconut oil and Other liquid Products	Rp. 25	/ton
Horses, Cows, Carabao, Pigs	Rp. 75	/each
Goats and Others	Rp. 50	/each
Motorcycles	Rp. 50	/each
<b>Vehicles Parking Tariff</b>		
Motorcycles	Rp. 50	
3 Wheeled Vehicles	Rp. 100	
4 Wheeled Small Veh.	Rp. 150	
Buses/Large Trucks	Rp. 200	
Connected Trucks	Rp. 250	
Trailer Trucks	Rp. 250	
Heavy Equipments		
Rubber Wheeled	Rp. 250	
Steel Wheeled	Rp. 250	
<b>Vehicles Weighing Tariff</b>		
4 Wheeled Small Veh.	Rp. 100	
Medium & Large Trucks	Rp. 150	
Connected Trucks	Rp. 200	
Trailer Trucks	Rp. 250	
Heavy Equipments		
Rubber Wheeled	Rp. 250	
Steel Wheeled	Rp. 500	
<b>Goods Stacking Tariff</b>		
Per ton/m <sup>3</sup>	Rp. 25	/day
<b>Land Rent</b>		
For Stores, Shops etc	Rp. 125	/m <sup>2</sup> /year
For Offices	Rp. 30	/m <sup>2</sup> /year
For Advertisement	Rp. 1,000	/m <sup>2</sup> /year
<b>Rooms Rent</b>		
Shipping Company Offices	Rp. 150	/m <sup>2</sup> /month
Other Offices	Rp. 200	/m <sup>2</sup> /month
Stores, Canteen etc	Rp. 8,000	/m <sup>2</sup> /year

Table 10-3-7A Disbursement Plan

(Unit: Million Rp.)

Route	1st Year	2nd Year	3rd Year	Total
Mokmer-Saubeba	402	3,750	6,714	10,866
Terong-Lewoleba	539	8,326	5,771	14,636
Bajoe-Kolaka	987	13,214	12,484	26,685
Palembang-Muntok	744	10,787	8,378	19,909
<b>Total</b>	<b>2,672</b>	<b>36,077</b>	<b>33,347</b>	<b>72,096</b>

Source: JICA Study Team

Table 10-3-8A Revised Construction Cost at Mokmer

(1,000 Rp.)

	Local	Foreign	Total
Breasting Dolphine	108,511	105,728	214,240
Fender System	72,227	70,363	142,590
Mooring Dolphine	50,843	49,547	100,390
M/B Dolphine	40,721	39,665	80,386
Movable Bridge	52,116	113,559	165,674
Hydraulic System	4,167	9,089	13,256
M/B Foundation	67,113	65,404	132,517
Catwalk	77,049	74,517	151,565
Approach Trestle	0	0	0
Armourstone	45,104	20,400	65,504
Causeway	1,306	586	1,892
Dredging	293,910	688,042	979,952
Breakwater	33,876	15,319	49,195
Navigation Aids	78,990	112,874	191,865
Wharf & Stage	202,498	197,274	399,772
Reclamation	503,391	259,347	762,738
Revetment	26,776	13,795	40,571
Roadwork	52,118	27,360	79,478
Overlay Pavement	22,855	11,268	34,121
Pavement	71,403	36,787	108,190
Green Area	51,394	20,118	71,512
Building	214,209	110,360	324,569
Water Supply	253,338	275,901	529,238
Electric Supply	114,002	124,155	238,157
Generators	76,001	82,770	158,772
Cathodic Protection	38,628	75,873	114,500
<b>TOTAL</b>	<b>2,562,647</b>	<b>2,598,098</b>	<b>5,150,845</b>

Table 10-3-9A Revised Construction Cost at Saubeba

	(1,000 Rp.)		
	Local	Foreign	Total
Breasting Dolphine	138,535	141,059	279,594
Fender System	87,993	89,585	177,577
Moorng Dolphine	66,381	67,599	133,981
M/B Dolphine	49,606	50,503	100,109
Movable Bridge	84,755	193,702	278,457
Hydraulic System	4,030	9,270	13,299
M/B Foundation	44,254	45,066	89,320
Catwalk	119,184	37,576	156,760
Approach Trestle	342,252	348,733	690,986
Armourstone	255,385	79,842	335,227
Causeway	7,385	2,302	9,687
Dredging	0	0	0
Breakwater	75,905	22,396	98,301
Navigation Aids	115,479	172,451	287,929
Wharf & Stage	246,379	250,837	497,216
Reclamation	317,439	108,404	425,843
Revetment	47,970	16,209	64,179
Roadwork	75,662	25,750	101,412
Overlay Pavement	32,732	11,266	43,998
Pavement	90,384	45,983	136,366
Green Area	62,506	25,405	87,911
Building	345,524	68,974	414,498
Water Supply	332,510	362,113	694,623
Electric Supply	107,106	55,179	162,285
Generators	160,659	82,769	243,428
Cathodic Protection	91,203	99,323	190,525
<b>TOTAL</b>	<b>3,301,218</b>	<b>2,412,295</b>	<b>5,713,513</b>

Table 10-3-10A Revised Construction Cost at Terong

	(1,000 Rp.)		
	Local	Foreign	Total
Breasting Dolphine	425,741	222,073	647,814
Fender System	66,318	73,038	139,356
Moorng Dolphine	340,279	177,493	517,771
M/B Dolphine	423,913	221,123	645,036
Movable Bridge	168,731	417,047	585,777
Hydraulic System	3,610	8,957	12,567
M/B Foundation	338,881	176,771	515,653
Catwalk	144,511	75,383	219,894
Approach Trestle	0	0	0
Armourstone	2,036,104	1,064,018	3,100,122
Causeway	63,954	22,122	86,076
Dredging	0	0	0
Breakwater	0	0	0
Navigation Aids	77,447	124,977	202,424
Wharf & Stage	0	0	0
Reclamation	90,887	31,296	122,183
Revetment	47,544	16,320	63,865
Roadwork	37,400	10,432	47,832
Overlay Pavement	16,819	5,216	22,035
Pavement	80,788	27,819	108,607
Green Area	49,331	19,705	69,036
Building	409,520	83,457	492,977
Water Supply	250,693	278,188	528,882
Electric Supply	112,812	125,185	237,997
Generators	75,208	83,457	158,665
Cathodic Protection	0	0	0
<b>TOTAL</b>	<b>5,260,490</b>	<b>3,264,077</b>	<b>8,524,567</b>



Table 10-3-11A Revised Construction Cost at Lewoleba

	(1,000 Rp.)		
	Local	Foreign	Total
Breasting Dolphine	250,226	263,626	514,052
Fender System	69,780	73,688	143,347
Mooring Dolphine	120,641	127,190	247,831
M/B Dolphine	359,228	378,810	738,037
Movable Bridge	125,538	296,256	421,795
Hydraulic System	3,799	9,022	12,821
M/B Foundation	166,818	175,872	342,688
Catwalk	152,246	75,566	227,811
Approach Trestle	164,063	172,566	336,629
Armourstone	0	0	0
Causeway	16,823	5,571	22,394
Dredging	0	0	0
Breakwater	0	0	0
Navigation Aids	81,489	125,882	207,372
Wharf & Stage	436,819	460,527	897,346
Reclamation	105,026	36,164	141,191
Revetment	44,573	15,300	59,874
Roadwork	37,713	13,562	51,275
Overlay Pavement	16,318	5,216	21,534
Pavement	80,789	27,819	108,608
Green Area	49,332	19,705	69,037
Building	409,527	83,456	492,984
Water Supply	250,698	278,187	528,885
Electric Supply	112,814	125,184	237,998
Generators	75,209	83,456	158,665
Cathodic Protection	43,518	86,934	130,452
<b>TOTAL</b>	<b>3,172,987</b>	<b>2,939,639</b>	<b>6,112,626</b>

Table 3-10-12A Revised Construction Cost at Bajoe

	(1,000 Rp.)		
	Local	Foreign	Total
Breasting Dolphine	194,723	203,621	398,344
Fender System	81,196	84,900	166,097
Mooring Dolphine	110,219	115,262	225,480
M/B Dolphine	364,190	380,875	745,065
Movable Bridge	270,620	640,688	911,309
Hydraulic System	3,667	8,676	12,343
M/B Foundation	0	0	0
Catwalk	94,242	46,585	140,826
Approach Trestle	1,687,584	1,764,563	3,452,147
Armourstone	0	0	0
Causeway	0	0	0
Dredging	779,330	1,842,173	2,621,502
Breakwater	0	0	0
Navigation Aids	113,946	174,867	288,813
Wharf & Stage	231,293	241,843	473,137
Reclamation	971,243	494,738	1,465,981
Revetment	282,630	144,070	426,899
Roadwork	116,234	59,208	175,443
Overlay Pavement	35,312	18,839	54,151
Pavement	226,623	115,439	342,062
Green Area	73,987	28,631	102,618
Building	1,287,619	429,460	1,717,079
Water Supply	362,624	412,282	794,906
Electric Supply	172,181	185,527	357,708
Generators	114,787	123,685	238,472
Truckscale	145,111	28,631	173,742
Cathodic Protection	102,873	200,128	303,001
<b>TOTAL</b>	<b>7,842,435</b>	<b>7,744,689</b>	<b>15,587,125</b>

Table 10-3-13A Revised Construction Cost at Kolaka

	(1,000 Rp.)		
	Local	Foreign	Total
Breasting Dolphine	361,470	373,094	734,564
Fender System	83,309	85,987	169,296
Mooring Dolphine	215,884	222,823	438,707
M/B Dolphine	373,666	385,750	759,416
Movable Bridge	377,619	882,481	1,260,100
Hydraulic System	3,762	8,787	12,550
M/B Foundation	0	0	0
Catwalk	96,694	47,181	143,875
Approach Trestle	613,699	632,871	1,246,570
Armourstone	0	0	0
Causeway	0	0	0
Dredging	0	0	0
Breakwater	0	0	0
Navigation Aids	107,918	163,481	271,399
Wharf & Stage	337,283	348,123	685,406
Reclamation	359,722	183,235	542,957
Revetment	206,391	105,131	311,522
Roadwork	197,847	100,779	298,626
Overlay Pavement	60,106	32,066	92,173
Pavement	226,625	115,438	342,063
Green Area	88,785	34,357	123,142
Building	1,287,628	429,457	1,717,085
Water Supply	382,626	412,279	794,906
Electric Supply	114,788	123,684	238,472
Generators	76,525	82,456	158,981
Truckscale	145,112	28,630	173,743
Cathodic Protection	279,955	301,651	581,606
<b>TOTAL</b>	<b>5,997,416</b>	<b>5,039,743</b>	<b>11,037,159</b>

Table 10-3-14A Revised Construction Cost at Palembang

	(1,000 Rp.)		
	Local	Foreign	Total
Breasting Dolphine	239,121	242,754	481,875
Fender System	71,167	72,248	143,415
Mooring Dolphine	107,170	108,783	215,953
M/B Dolphine	360,782	366,343	727,125
Movable Bridge	384,415	883,961	1,268,376
Hydraulic System	3,855	8,860	12,715
M/B Foundation	280,979	285,259	566,237
Catwalk	75,250	35,857	111,107
Approach Trestle	161,241	162,502	323,743
Armourstone	0	0	0
Causeway	0	0	0
Dredging	0	0	0
Breakwater	0	0	0
Navigation Aids	0	0	0
Wharf & Stage	316,684	321,496	638,180
Reclamation	203,380	102,290	305,670
Revetment	47,084	23,917	71,001
Roadwork	368,215	186,139	554,354
Overlay Pavement	37,678	20,046	57,724
Pavement	49,495	24,055	73,549
Green Area	89,053	34,364	123,417
Building	867,908	288,658	1,156,566
Water Supply	306,952	329,895	636,858
Electric Supply	138,133	148,453	286,586
Generators	76,741	82,474	159,214
Truckscale	74,884	43,070	117,953
Cathodic Protection	147,126	158,476	305,602
<b>TOTAL</b>	<b>4,407,321</b>	<b>3,929,899</b>	<b>8,337,220</b>

Table 10-3-15A Revised Construction Cost at Muntok

	(1,000 Rp.)		
	Local	Foreign	Total
Breasting Dolphine	226,992	233,953	460,945
Fender System	69,284	71,413	140,697
Mooring Dolphine	108,443	111,793	220,236
M/B Dolphine	350,157	361,004	711,161
Movable Bridge	433,331	1,011,705	1,445,036
Hydraulic System	3,753	8,758	12,511
M/B Foundation	273,543	281,962	555,505
Catwalk	92,460	44,893	137,353
Approach Trestle	417,754	430,595	848,350
Armourstone	0	0	0
Causeway	1,544	752	2,297
Dredging	0	0	0
Breakwater	385,221	583,814	969,035
Navigation Aids	71,789	108,619	180,407
Wharf & Stage	323,273	333,215	656,487
Reclamation	204,255	102,725	306,980
Revetment	78,474	39,862	118,336
Roadwork	412,408	208,473	620,882
Overlay Pavement	42,200	22,451	64,651
Pavement	80,843	39,289	120,132
Green Area	65,307	25,200	90,507
Building	867,925	288,655	1,156,580
Water Supply	306,988	329,892	636,880
Electric Supply	138,135	148,451	286,587
Generators	76,742	82,473	159,215
Truckscale	74,856	43,069	117,926
Cathodic Protection	748,472	804,352	1,552,824
<b>TOTAL</b>	<b>5,854,128</b>	<b>5,717,369</b>	<b>11,571,497</b>

Table 10-3-16A Service Life

Facilities	(Year) Service Life
Breasting Dolphine	50
Fender System	50
Mooring Dolphine	50
M/B Dolphine	50
Movable Bridge	50
Hydraulic System	10
M/B Foundation	50
Catwalk	50
Approach Trestle	50
Armourstone	50
Causeway	50
Dredging	10
Breakwater	50
Navigation Aids	10
Wharf & Stage	50
Reclamation	-
Revetment	50
Roadwork	50
Overlay Pavement	10
Pavement	10
Green Area	50
Building	25
Water Supply	30
Electric Supply	25
Generators	10
Truckscale	10
Cathodic Protection	50



















Table 10-4-5A FIRR Calculation in Mokmer-Saubeba Route  
BASE CASE

FIRR= 3.83%

(UNIT: Million Rp.)

YEAR	REVENUES			INVESTMENT	EXPENSES			REVENUE-COST	
	INCOME	SUBSIDY	TOTAL		PERSONNEL	MAINTEN.	ADMINIS.		TOTAL
1995		101	101	402				402	-302
1996		945	945	3,750				3,750	-2,805
1997		1,759	1,759	6,714				6,714	-4,955
1998	28	319	347	0	58	57	20	135	212
1999	29	318	347	0	58	57	20	135	212
2000	30	317	347	0	58	57	20	135	212
2001	31	316	347	0	58	57	20	135	212
2002	32	314	347	0	58	57	20	135	212
2003	39	308	347	0	58	57	20	135	212
2004	40	307	347	0	58	57	20	135	212
2005	42	320	362	0	58	57	20	135	227
2006	39	482	521	0	72	57	25	154	367
2007	41	1,959	2,000	1,231	72	57	25	1,385	615
2008	49	709	758	0	72	57	25	154	604
2009	51	696	748	0	72	57	25	154	594
2010	54	683	737	0	72	57	25	154	583
2011	56	670	726	0	72	57	25	154	573
2012	59	657	716	0	72	57	25	154	562
2013	71	634	705	0	72	57	25	154	551
2014	75	620	695	0	72	57	25	154	541
2015	78	606	684	0	72	57	25	154	530
2016	82	591	673	0	72	57	25	154	520
2017	93	1,815	1,908	1,231	82	57	29	1,399	509
2018	112	554	666	0	82	57	29	167	498
2019	118	538	655	0	82	57	29	167	488
2020	124	521	645	0	82	57	29	167	477
2021	130	504	634	0	82	57	29	167	467
2022	137	1,626	1,763	1,140	82	57	29	1,307	456
2023	186	443	629	0	94	57	33	184	445
2024	195	424	618	0	94	57	33	184	435
2025	205	388	593	0	94	57	33	184	409
2026	215	227	442	0	94	57	33	184	258
2027	227	0	227	-4,141	94	57	33	-3,957	4,184
<b>TOTAL</b>	<b>2,669</b>	<b>20,670</b>	<b>23,339</b>	<b>10,327</b>	<b>2,218</b>	<b>1,702</b>	<b>776</b>	<b>15,023</b>	<b>8,315</b>

Table 10-4-6A FIRR Calculation in Larantuka-Terong-Lewoleba Route  
BASE CASE

FIRR= 3.85%

(UNIT: Million Rp.)

YEAR	REVENUES			EXPENSES				TOTAL	REVENUE-COST
	INCOME	SUBSIDY	TOTAL	INVESTMENT	PERSONNEL	MAINTEN.	ADMINIS.		
1995		135	135	539				539	-404
1996		2,092	2,092	8,326				8,326	-6,234
1997		1,616	1,616	5,771				5,771	-4,155
1998	26	411	437	0	67	61	23	152	285
1999	43	394	437	0	67	61	23	152	285
2000	44	394	437	0	67	61	23	152	285
2001	45	393	437	0	67	61	23	152	285
2002	45	392	437	0	67	61	23	152	285
2003	53	384	437	0	67	61	23	152	285
2004	55	382	437	0	67	61	23	152	285
2005	56	401	457	0	67	61	23	152	306
2006	58	712	769	0	67	61	23	152	617
2007	59	1,931	1,990	1,013	67	61	23	1,165	825
2008	71	905	976	0	77	61	27	165	811
2009	73	889	962	0	77	61	27	165	797
2010	75	873	948	0	77	61	27	165	782
2011	77	856	933	0	77	61	27	165	768
2012	80	839	919	0	77	61	27	165	754
2013	95	810	905	0	77	61	27	165	739
2014	98	793	890	0	77	61	27	165	725
2015	101	775	876	0	77	61	27	165	711
2016	105	757	862	0	77	61	27	165	697
2017	109	1,752	1,861	1,013	77	61	27	1,179	682
2018	130	703	833	0	77	61	27	165	668
2019	135	684	819	0	77	61	27	165	654
2020	135	670	805	0	77	61	27	165	640
2021	135	655	791	0	77	61	27	165	625
2022	135	2,103	2,238	1,462	77	61	27	1,627	611
2023	155	607	762	0	77	61	27	165	597
2024	155	592	748	0	77	61	27	165	582
2025	155	558	713	0	77	61	27	165	548
2026	155	232	387	0	77	61	27	165	222
2027	155	10	165	-5,769	77	61	27	-5,604	5,769
TOTAL	2,815	25,699	28,514	12,355	2,210	1,840	774	17,179	11,335

Table 10-4-7A FIRR Calculation in Bajoe-Kolaka Route  
BASE CASE

FIRR= 3.91%

(UNIT: Million Rp.)

YEAR	REVENUES			EXPENSES				TOTAL	REVENUE- COST
	INCOME	SUBSIDY	TOTAL	INVESTMENT	PERSONNEL	MAINTEN.	ADMINIS.		
1995		247	247	987				987	-740
1996		3,323	3,323	13,214				13,214	-9,891
1997		3,398	3,398	12,484				12,484	-9,086
1998	148	733	880	0	146	163	51	360	520
1999	155	725	880	0	146	163	51	360	520
2000	164	717	880	0	146	163	51	360	520
2001	172	708	880	0	146	163	51	360	520
2002	181	699	880	0	146	163	51	360	520
2003	228	672	899	0	160	163	56	379	520
2004	239	660	899	0	160	163	56	379	520
2005	252	684	936	0	160	163	56	379	557
2006	265	1,166	1,431	0	160	163	56	379	1,052
2007	278	3,767	4,046	2,160	160	163	56	2,539	1,506
2008	346	1,532	1,878	0	174	163	61	398	1,480
2009	364	1,488	1,852	0	174	163	61	398	1,454
2010	383	1,443	1,826	0	174	163	61	398	1,428
2011	403	1,397	1,800	0	174	163	61	398	1,402
2012	408	1,366	1,774	0	174	163	61	398	1,376
2013	469	1,278	1,748	0	174	163	61	398	1,350
2014	469	1,252	1,722	0	174	163	61	398	1,324
2015	469	1,226	1,696	0	174	163	61	398	1,298
2016	469	1,200	1,670	0	174	163	61	398	1,272
2017	469	3,335	3,804	2,160	174	163	61	2,558	1,246
2018	540	1,078	1,618	0	174	163	61	398	1,220
2019	540	1,052	1,592	0	174	163	61	398	1,194
2020	540	1,026	1,566	0	174	163	61	398	1,168
2021	540	1,000	1,540	0	174	163	61	398	1,142
2022	540	5,004	5,544	4,030	174	163	61	4,428	1,116
2023	621	867	1,488	0	174	163	61	398	1,090
2024	621	841	1,462	0	174	163	61	398	1,064
2025	621	778	1,399	0	174	163	61	398	1,001
2026	621	257	878	0	174	163	61	398	480
2027	621	0	621	-10,942	174	163	61	-10,545	11,166
TOTAL	12,136	44,918	57,054	24,094	5,010	4,884	1,754	35,742	21,313

Table 10-4-8A FIRR Calculation in Palembang-Muntok Route  
BASE CASE

FIRR= 3.94%

(UNIT: Million Rp.)

YEAR	REVENUES			EXPENSES					REVENUE-COST
	INCOME	SUBSIDY	TOTAL	INVESTMENT	PERSONNEL	MAINTEN.	ADMINIS.	TOTAL	
1995		186	186	744				744	-558
1996		2,711	2,711	10,787				10,787	-8,076
1997		2,319	2,319	8,378				8,378	-6,059
1998	71	533	604	0	82	105	29	215	388
1999	73	531	604	0	82	105	29	215	388
2000	74	529	604	0	82	105	29	215	388
2001	76	527	604	0	82	105	29	215	388
2002	78	525	604	0	82	105	29	215	388
2003	93	511	604	0	82	105	29	215	388
2004	95	508	604	0	82	105	29	215	388
2005	98	534	631	0	82	105	29	215	416
2006	102	950	1,051	0	94	105	33	232	820
2007	105	2,326	2,430	1,076	94	105	33	1,308	1,123
2008	124	1,211	1,335	0	94	105	33	232	1,103
2009	127	1,188	1,316	0	94	105	33	232	1,084
2010	131	1,165	1,296	0	94	105	33	232	1,065
2011	135	1,142	1,277	0	94	105	33	232	1,045
2012	139	1,119	1,257	0	94	105	33	232	1,026
2013	164	1,074	1,238	0	94	105	33	232	1,006
2014	171	1,061	1,232	0	104	105	36	245	987
2015	176	1,036	1,213	0	104	105	36	245	968
2016	182	1,012	1,193	0	104	105	36	245	948
2017	187	2,062	2,250	1,076	104	105	36	1,321	929
2018	224	930	1,154	0	104	105	36	245	909
2019	232	919	1,151	0	116	105	41	261	890
2020	239	892	1,132	0	116	105	41	261	870
2021	247	865	1,112	0	116	105	41	261	851
2022	256	3,724	3,979	2,886	116	105	41	3,148	832
2023	304	770	1,073	0	116	105	41	261	812
2024	310	744	1,054	0	116	105	41	261	793
2025	317	689	1,007	0	116	105	41	261	746
2026	325	259	584	0	116	105	41	261	322
2027	332	0	332	-8,546	116	105	41	-8,284	8,617
TOTAL	5,186	34,554	39,740	16,402	2,972	3,139	1,040	23,553	18,187

Table 10-6-1(1)A

Sensitivity Analysis in Mokmer-Saubeba

Route

Revenue 10% Down

Year	Invest		Repayment	Interest	Operation	Total
	Year	Reinvest				
1995	101	0	0	0	0	101
1996	938	0	0	8	0	946
1997	1,679	0	0	81	0	1,760
1998	0	0	0	212	108	320
1999	0	0	0	212	108	320
2000	0	0	0	212	108	320
2001	0	0	0	212	107	319
2002	0	0	0	212	106	318
2003	0	0	0	212	100	312
2004	0	0	0	212	99	311
2005	0	0	15	212	97	324
2006	0	0	156	211	119	486
2007	1,231	0	407	207	117	1,962
2008	0	0	407	197	110	714
2009	0	0	407	186	108	701
2010	0	0	407	178	108	689
2011	0	0	407	168	103	678
2012	0	0	407	154	101	663
2013	0	0	407	144	90	641
2014	0	0	407	133	87	628
2015	0	0	407	123	83	614
2016	0	0	407	112	80	599
2017	1,231	0	407	102	84	1,824
2018	0	0	407	91	67	565
2019	0	0	407	80	62	549
2020	0	0	407	70	56	533
2021	0	0	407	59	50	517
2022	1,140	0	407	49	44	1,539
2023	0	0	407	38	17	462
2024	0	0	407	27	8	443
2025	0	0	392	17	-1	409
2026	0	0	252	7	-10	248
2027	0	0	0	0	-20	-20
Total	6,318	0	8,150	4,132	2,294	20,894

Construction Cost 10% Up

Table 10-6-1(2)A

Sensitivity Analysis in Mokmer-Saubeba

Route

Year	Invest		Repayment	Interest	Operation	Total
	Year	Reinvest				
1995	111	0	0	0	0	111
1996	1,031	0	0	9	0	1,040
1997	1,846	0	0	89	0	1,935
1998	0	0	0	233	112	345
1999	0	0	0	233	111	344
2000	0	0	0	233	110	343
2001	0	0	0	233	109	342
2002	0	0	0	233	108	341
2003	0	0	0	233	102	335
2004	0	0	0	233	101	334
2005	0	0	17	233	99	349
2006	0	0	171	233	120	524
2007	1,354	0	448	228	119	2,149
2008	0	0	448	217	110	775
2009	0	0	448	205	108	761
2010	0	0	448	195	108	747
2011	0	0	448	182	103	733
2012	0	0	448	170	101	719
2013	0	0	448	158	89	695
2014	0	0	448	147	85	680
2015	0	0	448	135	81	664
2016	0	0	448	123	77	649
2017	1,354	0	448	112	61	1,995
2018	0	0	448	100	61	609
2019	0	0	448	88	56	592
2020	0	0	448	77	49	574
2021	0	0	448	65	43	556
2022	1,253	0	448	53	36	1,791
2023	0	0	448	42	4	494
2024	0	0	448	30	-5	473
2025	0	0	432	18	-15	435
2026	0	0	277	7	-26	258
2027	0	0	0	0	-37	-37
Total	6,950	0	8,964	4,545	2,197	22,657

Construction Cost 10% Up and Revenue 10% Down

Table 10-6-1(3)A

Sensitivity Analysis in Mokmer-Saubeba

Route

Year	Invest		Repayment	Interest	Operation	Total
	Year	Reinvest				
1995	111	0	0	0	0	111
1996	1,031	0	0	9	0	1,040
1997	1,846	0	0	89	0	1,935
1998	0	0	0	233	115	348
1999	0	0	0	233	114	347
2000	0	0	0	233	113	346
2001	0	0	0	233	112	345
2002	0	0	0	233	111	344
2003	0	0	0	233	106	339
2004	0	0	0	233	105	338
2005	0	0	17	233	103	353
2006	0	0	171	233	124	525
2007	1,354	0	448	228	124	2,153
2008	0	0	448	217	115	780
2009	0	0	448	205	113	763
2010	0	0	448	193	111	753
2011	0	0	448	182	109	739
2012	0	0	448	170	107	725
2013	0	0	448	158	96	702
2014	0	0	448	147	92	687
2015	0	0	448	135	89	672
2016	0	0	448	123	85	657
2017	1,354	0	448	112	90	2,004
2018	0	0	448	100	72	621
2019	0	0	448	88	67	604
2020	0	0	448	77	62	587
2021	0	0	448	65	56	569
2022	1,253	0	448	53	50	1,805
2023	0	0	448	42	22	512
2024	0	0	448	30	14	492
2025	0	0	432	18	5	455
2026	0	0	277	7	-4	280
2027	0	0	0	0	-15	-15
Total	6,950	0	8,964	4,545	2,464	22,924



Table 10-6-2(1)A

Sensitivity Analysis in Larantuka-Terong-  
Lewoleba Route

Revenue 10% Down

Year	(Unit: Million Rp.)			
	Invest Reinvest	Repayment	Interest	Operation Total
1995	135	0	0	135
1996	2,082	11	0	2,093
1997	1,443	0	173	1,616
1998	0	285	128	414
1999	0	285	113	399
2000	0	285	113	398
2001	0	285	112	397
2002	0	285	111	396
2003	0	285	104	389
2004	0	285	103	388
2005	0	285	101	407
2006	0	332	285	717
2007	1,013	98	276	1,937
2008	0	548	262	810
2009	0	548	248	796
2010	0	548	233	781
2011	0	548	219	767
2012	0	549	205	754
2013	0	549	191	740
2014	0	549	176	725
2015	0	549	162	711
2016	0	549	148	697
2017	1,013	549	134	1,763
2018	0	549	119	668
2019	0	549	105	654
2020	0	549	91	640
2021	0	549	76	625
2022	1,482	549	62	2,117
2023	0	549	48	597
2024	0	549	34	583
2025	0	529	19	548
2026	0	216	6	247
2027	0	0	0	25
Total	7,148	40,877	5,565	2,291

Table 10-6-2(2)A

Sensitivity Analysis in Larantuka-Terong-  
Lewoleba Route

Construction Cost 10% Up

Year	(Unit: Million Rp.)			
	Invest Reinvest	Repayment	Interest	Operation Total
1995	148	0	0	148
1996	2,290	0	12	2,301
1997	1,587	0	190	1,777
1998	0	314	0	314
1999	0	314	132	446
2000	0	314	115	429
2001	0	314	114	428
2002	0	314	113	427
2003	0	314	112	426
2004	0	314	104	418
2005	0	314	103	417
2006	0	314	102	438
2007	1,115	366	99	1,799
2008	0	604	304	908
2009	0	604	288	892
2010	0	604	272	876
2011	0	604	257	861
2012	0	604	241	845
2013	0	604	225	829
2014	0	604	210	814
2015	0	604	194	798
2016	0	604	178	782
2017	1,115	604	163	1,882
2018	0	604	147	751
2019	0	604	131	735
2020	0	604	115	719
2021	0	604	98	702
2022	1,508	604	84	2,216
2023	0	604	68	672
2024	0	604	53	657
2025	0	604	37	641
2026	0	582	21	599
2027	0	238	6	260
Total	7,862	12,075	6,182	28,232

Table 10-6-2(3)A

Sensitivity Analysis in Larantuka-Terong-  
Lewoleba Route

Construction Cost 10% Up and Revenue 10% Down

Year	(Unit: Million Rp.)			
	Invest Reinvest	Repayment	Interest	Operation Total
1995	148	0	0	148
1996	2,290	0	12	2,301
1997	1,587	0	190	1,777
1998	0	314	0	314
1999	0	314	134	448
2000	0	314	119	433
2001	0	314	118	432
2002	0	314	117	431
2003	0	314	110	424
2004	0	314	109	423
2005	0	314	107	444
2006	0	366	106	472
2007	1,115	604	105	1,824
2008	0	604	288	892
2009	0	604	272	876
2010	0	604	257	861
2011	0	604	241	845
2012	0	604	225	829
2013	0	604	210	814
2014	0	604	194	798
2015	0	604	178	782
2016	0	604	163	767
2017	1,115	604	147	1,866
2018	0	604	131	735
2019	0	604	115	719
2020	0	604	98	702
2021	0	604	84	686
2022	1,608	604	68	2,280
2023	0	604	53	657
2024	0	604	37	641
2025	0	582	21	599
2026	0	238	6	260
2027	0	0	0	25
Total	7,862	12,075	6,182	28,232

Table 10-6-3(1)A

Sensitivity Analysis in Bajoe-Kolaka

Route

Revenue 10% Down

Year	Invest			Operation			Total
	Reinvest	Repayment	Interest	Repayment	Interest	Operation	
1995	247	0	0	0	0	0	247
1996	3,304	0	19	0	0	0	3,323
1997	3,121	277	0	0	0	0	3,398
1998	0	0	520	227	0	0	747
1999	0	0	520	0	0	0	1,040
2000	0	0	520	0	0	0	1,040
2001	0	0	520	0	0	0	1,040
2002	0	0	520	0	0	0	1,040
2003	0	0	520	197	0	0	717
2004	0	0	520	174	0	0	694
2005	0	0	520	183	0	0	703
2006	0	37	519	152	0	0	710
2007	2,160	533	506	141	0	0	3,240
2008	0	1,001	480	129	0	0	1,610
2009	0	1,001	454	70	0	0	1,525
2010	0	1,001	427	53	0	0	1,481
2011	0	1,001	401	35	0	0	1,437
2012	0	1,001	375	30	0	0	1,406
2013	0	1,001	349	-25	0	0	1,325
2014	0	1,001	323	-25	0	0	1,299
2015	0	1,001	297	-25	0	0	1,273
2016	0	1,001	271	-25	0	0	1,247
2017	2,160	1,001	245	-25	0	0	3,382
2018	0	1,001	219	-88	0	0	1,132
2019	0	1,001	193	-88	0	0	1,106
2020	0	1,001	167	-88	0	0	1,080
2021	0	1,001	141	-88	0	0	1,054
2022	4,030	1,001	115	-88	0	0	5,058
2023	0	1,001	89	-161	0	0	929
2024	0	1,001	63	-161	0	0	903
2025	0	984	37	-161	0	0	840
2026	0	468	12	-161	0	0	319
2027	0	0	0	-161	0	0	-161
Total	15,023	20,014	10,147	726	0	0	45,909

Table 10-6-3(2)A

Sensitivity Analysis in Bajoe-Kolaka

Route

Construction Cost 10% Up

Year	Invest			Operation			Total
	Reinvest	Repayment	Interest	Repayment	Interest	Operation	
1995	271	0	0	0	0	0	271
1996	3,634	0	21	0	0	0	3,655
1997	3,433	0	305	0	0	0	3,738
1998	0	0	572	229	0	0	801
1999	0	0	572	221	0	0	793
2000	0	0	572	213	0	0	785
2001	0	0	572	204	0	0	777
2002	0	0	572	195	0	0	768
2003	0	0	572	187	0	0	760
2004	0	0	572	178	0	0	752
2005	0	41	572	169	0	0	743
2006	0	586	571	160	0	0	734
2007	2,377	1,101	556	151	0	0	4,185
2008	0	1,101	527	142	0	0	3,750
2009	0	1,101	499	133	0	0	3,323
2010	0	1,101	470	124	0	0	2,900
2011	0	1,101	442	115	0	0	2,477
2012	0	1,101	413	106	0	0	2,054
2013	0	1,101	384	97	0	0	1,631
2014	0	1,101	356	88	0	0	1,208
2015	0	1,101	327	79	0	0	785
2016	0	1,101	299	70	0	0	362
2017	2,377	1,101	270	61	0	0	4,849
2018	0	1,101	241	52	0	0	4,426
2019	0	1,101	213	43	0	0	4,003
2020	0	1,101	184	34	0	0	3,580
2021	0	1,101	155	25	0	0	3,157
2022	4,433	1,101	127	16	0	0	6,777
2023	0	1,101	98	7	0	0	2,306
2024	0	1,101	70	0	0	0	1,883
2025	0	1,060	41	0	0	0	1,460
2026	0	515	13	0	0	0	1,037
2027	0	0	0	0	0	0	-207
Total	16,525	22,015	11,162	0	0	0	49,702

Table 10-6-3(3)A

Sensitivity Analysis in Bajoe-Kolaka

Route

Construction Cost 10% Up and Revenue 10% Down

Year	Invest			Operation			Total
	Reinvest	Repayment	Interest	Repayment	Interest	Operation	
1995	271	0	0	0	0	0	271
1996	3,534	0	21	0	0	0	3,555
1997	3,433	0	305	0	0	0	3,738
1998	0	0	572	243	0	0	815
1999	0	0	572	236	0	0	808
2000	0	0	572	228	0	0	801
2001	0	0	572	221	0	0	794
2002	0	0	572	213	0	0	786
2003	0	0	572	205	0	0	778
2004	0	0	572	197	0	0	770
2005	0	41	572	188	0	0	762
2006	0	586	571	180	0	0	754
2007	2,377	1,101	556	171	0	0	4,135
2008	0	1,101	527	162	0	0	3,711
2009	0	1,101	499	153	0	0	3,286
2010	0	1,101	470	144	0	0	2,861
2011	0	1,101	442	135	0	0	2,436
2012	0	1,101	413	126	0	0	2,011
2013	0	1,101	384	117	0	0	1,586
2014	0	1,101	356	108	0	0	1,161
2015	0	1,101	327	99	0	0	736
2016	0	1,101	299	90	0	0	311
2017	2,377	1,101	270	81	0	0	4,849
2018	0	1,101	241	72	0	0	4,426
2019	0	1,101	213	63	0	0	4,003
2020	0	1,101	184	54	0	0	3,580
2021	0	1,101	155	45	0	0	3,157
2022	4,433	1,101	127	36	0	0	6,777
2023	0	1,101	98	27	0	0	2,306
2024	0	1,101	70	18	0	0	1,883
2025	0	1,060	41	9	0	0	1,460
2026	0	515	13	0	0	0	1,037
2027	0	0	0	0	0	0	-207
Total	16,525	22,015	11,162	1,214	0	0	50,916

Table 10-6-4(1)A

Sensitivity Analysis in Palembang-Muntok Route

Revenue 10% Down

Year	(Unit: Million Rp.)			
	Invest Reinvest	Repayment Interest	Operation	Total
1995	186	0	0	186
1996	2,657	15	0	2,711
1997	2,095	0	225	2,319
1998	0	388	152	540
1999	0	388	150	538
2000	0	388	148	537
2001	0	388	147	535
2002	0	388	145	533
2003	0	388	132	520
2004	0	388	130	518
2005	0	28	127	543
2006	0	432	388	140
2007	1,078	747	378	2,338
2008	0	747	357	1,224
2009	0	747	337	1,201
2010	0	747	316	1,178
2011	0	747	299	1,156
2012	0	747	279	1,133
2013	0	747	260	1,080
2014	0	747	240	1,078
2015	0	747	221	86
2016	0	747	202	1,054
2017	1,075	747	182	2,081
2018	0	747	163	43
2019	0	747	143	53
2020	0	747	124	46
2021	0	747	104	39
2022	2,886	747	85	3,749
2023	0	747	66	12
2024	0	747	45	800
2025	0	719	27	-18
2026	0	314	8	-24
2027	0	0	0	-31
2027	0	0	0	-38
Total	10,016	14,932	7,570	2,484
Total				35,002

Table 10-6-4(2)A

Sensitivity Analysis in Palembang-Muntok Route

Construction Cost 10% Up

Year	(Unit: Million Rp.)			
	Invest Reinvest	Repayment Interest	Operation	Total
1995	205	0	0	205
1996	2,966	18	0	2,982
1997	2,304	0	0	2,304
1998	0	427	155	582
1999	0	427	153	580
2000	0	427	151	578
2001	0	427	149	576
2002	0	427	147	574
2003	0	427	133	560
2004	0	427	131	558
2005	0	31	427	586
2006	0	476	426	140
2007	1,184	821	414	2,419
2008	0	821	393	1,184
2009	0	821	371	1,184
2010	0	821	350	1,184
2011	0	821	328	1,184
2012	0	821	307	1,184
2013	0	821	285	1,184
2014	0	821	264	1,184
2015	0	821	243	1,184
2016	0	821	222	1,184
2017	1,184	821	200	2,273
2018	0	821	179	31
2019	0	821	158	40
2020	0	821	136	32
2021	0	821	115	24
2022	3,175	821	94	4,106
2023	0	821	72	-32
2024	0	821	51	-39
2025	0	791	30	-46
2026	0	346	9	-33
2027	0	0	0	-80
Total	11,017	16,423	8,327	2,279
Total				38,049

Table 10-6-4(3)A

Sensitivity Analysis in Palembang-Muntok Route

Construction Cost 10% Up and Revenue 10% Down

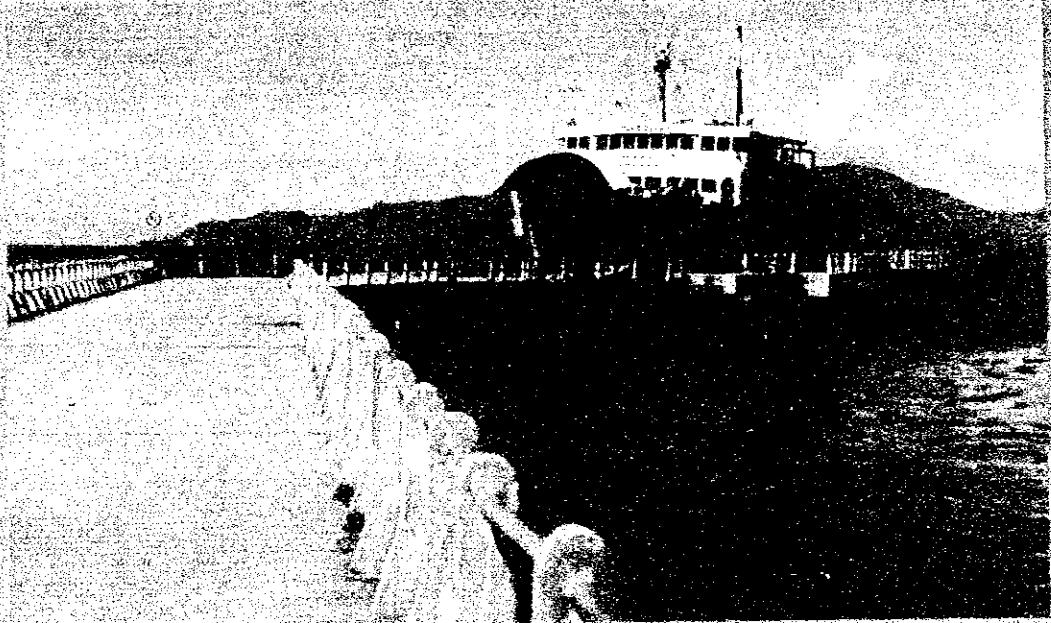
Year	(Unit: Million Rp.)			
	Invest Reinvest	Repayment Interest	Operation	Total
1995	205	0	0	205
1996	2,966	15	0	2,982
1997	2,304	0	0	2,304
1998	0	427	162	589
1999	0	427	161	588
2000	0	427	159	586
2001	0	427	157	584
2002	0	427	155	582
2003	0	427	142	569
2004	0	427	140	567
2005	0	31	427	586
2006	0	476	426	150
2007	1,184	821	414	2,419
2008	0	821	393	1,184
2009	0	821	371	1,184
2010	0	821	350	1,184
2011	0	821	328	1,184
2012	0	821	307	1,184
2013	0	821	286	1,184
2014	0	821	264	1,184
2015	0	821	243	1,184
2016	0	821	222	1,184
2017	1,184	821	200	2,273
2018	0	821	179	59
2019	0	821	158	83
2020	0	821	136	56
2021	0	821	115	49
2022	3,175	821	94	4,131
2023	0	821	72	-2
2024	0	821	51	-8
2025	0	791	30	-14
2026	0	346	9	-20
2027	0	0	0	-27
Total	11,017	16,423	8,327	2,198
Total				38,567







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