

Indonesia

Local and Urban Road Development Project

Report Date : October 2002

Field Survey : July 2001

1. Project Profile and Japan's ODA Loan

Local Road Component

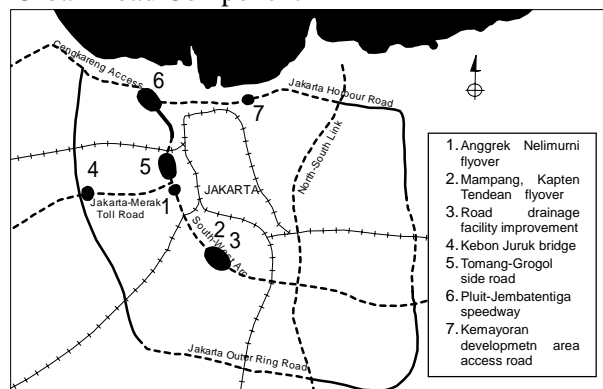


Project Location Map



Local Road (Pangkep in South Sulawesi)

Urban Road Component



Project Location Map



Urban Road (Anggrek Nelimurni flyover in Jakarta)

1.1 Background

As denoted in the national five year development plan (Replita V, 1989–1993), the development of road networks was one of the important issues to promote the production and export of non-oil products and to achieve well balanced regional development.

The Government of Indonesia was undertaking the development of local roads with financial assistance from the World Bank, Asian Development Bank and JBIC. Based on a JICA study completed in March 1986, JBIC had been implementing the Local Road Development Project in the 38 Kabupatens of ten provinces since 1987. Because of the low ratio of improved road length to total length, the continuous development of local roads was of great importance.

Besides the development of local roads, urban road development was also the important issue to be addressed. Traffic volume in Jakarta had been rapidly increasing due to the population concentration. Since the 1980s, the Government of Indonesia had developed urban toll road network for the purpose of mitigating traffic congestion. In order to enhance the effectiveness of the toll road network and further improve the urban traffic in Jakarta, additional improvement projects such as

construction of a flyover, widening of critical section, and extension of toll road access were urgently required.

1.2 Objectives

The project aimed at developing local and urban road networks. The objectives of the local road development were to rehabilitate the local roads that had not been covered by the preceding local road development project (Phase II) in the 39 kabupaten of 10 provinces. This effort would enable efficient use of local roads and lead to the promotion of local economic development and social welfare.

The objectives of the urban road development were to improve ordinary urban roads related to toll roads and to extend access roads connecting with toll roads in Jakarta City, in order to facilitate smooth transportation and provide better mobility for society and industry in the area.

1.3 Project Scope

- 1) Local Road development
 - a. Improving selected primary kabupaten roads in 10 provinces, including upgrading of existing road surface types, drainages and related structures.
 - b. Maintaining selected kabupaten roads in 10 provinces
 - c. Procuring maintenance equipment and spare parts required for the implementation of the above works
- 2) Urban Road development
 - a. Construction of Anggrek Nelimurni Flyover
 - b. Kuningan Area drainage improvement
 - c. Construction of Mampang Flyover, Kapten Tendean Flyover
 - d. Construction of Kebon Juruk Flyover
 - e. Construction of Frontage road from Tomang to Grogol
 - f. Construction of Pluit – Jembatan Tiga Expressway
 - g. Construction of Access Road to Kemayoran
- 3) Consulting Services
 - a. Detailed design
 - b. Construction supervision
 - c. Assistance for tendering

1.4 Borrower/Executing Agency

Borrower: The Republic of Indonesia

Executing Agency: Directorate General of Highways (BINA MARGA),
Ministry of Public Works

1.5 Outline of Loan Agreement

Loan Amount	16,772 million yen
Loan Disbursed Amount	15,866 million yen
Exchange of Notes	December 1990
Loan Agreement	December 1990
Terms and Conditions	2.5% p.a. 30 years (10 years) General Untied (Consulting Services: Partially Untied)
Interest Rate	
Repayment Period (Grace Period)	
Procurement	
Final Disbursement Date	June 1999

2. Results and Evaluation

2.1 Relevance

Local Road

The project objective was to achieve balanced development in rural areas of Indonesia by improving the Kabupaten road network. At the time of project appraisal, the development of rural infrastructure was prioritized in order to promote the increase of socio-economic activities and the welfare of rural residents, as described in the Fifth National Five Year Development Plan (Repelita V, 1989-1993). Accordingly, the project was consistent with the national development plan at that time. The basic policy was continued as part of the current National Development Program [PROPENAS 2000-2004], which emphasizes the importance of transport infrastructure development and rehabilitation of existing roads as a priority program. Thus, the original objectives still meet the goals of the national development policy and development plan.

Urban Road

The project aimed to contribute to socio-economic development in Jakarta by improving and extending the urban road network related to intra-urban expressways. The Repelita V, effective at the time of project appraisal, emphasized that the transport bottlenecks should be improved through the infrastructure reinforcement program.

This policy was retained in the PROPENAS (2000-2004) in terms of the realization of the minimum transportation services availability while at the same time supporting economic recovery effort.

Accordingly, the project was relevant at the time of appraisal and is consistent with the current National Development Program.

2.2 Efficiency

(2.2.1) Project Scope

This project comprised three components: local road development, urban road development and consulting services.

Local Road

Local road development included improvement of 1,190 km and maintenance of 3,761 km in total road length, as well as equipment supply for kabupaten roads in 39 kabupatens of 10 provinces. The procurement of equipment was completed as planned, however the data on the sections that the procured equipment was actually used for civil works are not exactly identified in this survey. In addition, this project met an emergency need in the area, such as the rehabilitation of damages caused by an earthquake that struck on December 12, 1992. In April 1993, additional reconstruction and improvement works were requested for local roads in Kab. Ngada and Kab. Ende of Flores, both of which had been damaged by the earthquake. These works were approved together with another request for equipment supply to three kabupatens in Flores.

Urban Road

Urban road development consists of seven projects to improve critical sections of arterial roads, especially those that would provide better access to the toll road network. All of these were implemented based on the original scope, with some minor modifications made according to the specifications of the project consultant.

(2.2.2) Implementation Schedule

Local Road

The local road component was originally scheduled for implementation from 1990 to 1994. Road works in the additional two kabupatens were implemented from mid-1993 to February 1994 in order to repair damage caused by the 1993 earthquake in Flores. Road construction equipment was supplied according to the original schedule, although items and quantities were modified in accordance with local needs.

Urban Road

The urban road component were originally scheduled from July 1990 to February 1995. Actual implementation followed the schedule as originally planned except for a part of Package 4, the Kemayoran Access Road. The project site of the Kemayoran Access Road was heavily populated by squatters, and land acquisition was delayed by 30 months. Because of the land acquisition problem, the project was not completed until July 1999, five years behind schedule.

(2.2.3) Project Cost

The total project cost, planned at the time of project appraisal, was 19,732 million yen, of which the JBIC finance was to cover 16,772 million yen. The actual cost of the JBIC-financed portion was 15,866 million yen, 5.4% less the original plan. Outside the JBIC-financed portion, however, information on the actual cost is not available from the executing agency offices.

2.3 Effectiveness

(2.3.1) Traffic Volume

Local Road

Among the four kabupatens the evaluation mission visited, traffic data was obtained only in Kab. Gowa of South Sulawesi. Table 1 shows the comparison between the expected traffic volume for 1998, forecast in 1987, and the actual traffic volume as recorded in 1998.

Actual traffic volumes in 1998 exceeded forecast values for that year, estimated in 1987, on most links; actual ones were, on average, 1.47 times forecast ones. In the case of Kab. Gowa, traffic volume had been estimated to grow at 4.24% per annum, while the actual growth rate was 7.4% per annum. Local road development may have contributed significantly to the high growth rate.

Table 1: Traffic Volume on Selected Links of Kab. Gowa

Link	Section	Length (km)	(Unit: PCU/day)			
			1985	1998		(3)/(2)
			(1)Actual	(2)Forecast	(3)Actual	
1	Pabbangngiang – Pattallassang	12	230	395	365	0.92
2	Pattallassang – Paccellekang	3	83	141	239	1.70
5	Rappokaleleng – Pabbundukang	14	175	301	470	1.56
7	Rappodaang – Tanrorita	30	2	4	24	6.93
11	Sanrangang – Malakaji	39	4	6	76	13.80
12	Pattallassang – Pakkatto	7	95	162	247	1.52
19	Lanna – Peo	14	150	257	272	1.06
39	Kalukuang – Moncobalang	7	160	275	215	0.78
40	Moncobalang - Simpang Limbung	7	80	137	247	1.81
41	Boka – Pabbentengang	11	120	206	179	0.87
44	Doja – Ciniayo	6	75	128	211	1.65
45	Paccellekang – KMUP	7	65	111	273	2.46
58	Bontolangkasa – Jipang	14	75	128	310	2.42
Average Traffic Volume		171	78	134	197	1.47

Note: (2) traffic volume forecast in 1987

(3) traffic volume estimated based on actual volumes in 1985 and 2001

n.a.: not available

Source: DPUK of Kabupaten Gowa

Urban Road

The traffic count for April–July 2000, recorded for JICA’s “Study on Integrated Transport Master Plan for Jabotabek,” revealed that DKI Jakarta experienced a significant increase in traffic during the 1990s. Daily traffic (excluding motorcycles) crossing the screen line¹⁾ called the South-West Arc, which surrounds the west and the south of Inner Jakarta, increased from 707,000 vehicles in 1988 to 777,000 vehicles in 1993, and further to 905,000 in 2000. Accordingly, the annual growth rate rose from 6.1% p.a. during 1988 – 1993 to 6.5% p.a. during 1993 – 2000.

To cope with this expansion of demand, the Government of DKI Jakarta has been making efforts to develop an urban toll road network, consisting of inner and outer rings and several radials. The said South-West Arc is a main part of the inner ring. The urban road package of this project was

¹⁾ The South–West Arc consists of Jl. Prof. Dr. Latumenten – Jl. Letien S. Parman – Jl. Jendral Gatot Subroto – Jl. Jetjen Haryono M.T. – Jl. Tol. Jakarta Cikampec, see Figure 2

planned to support and facilitate this toll road system.

Although the precise traffic data for project roads could not be obtained, the volume in 2000 is estimated to have been 50,000 to 60,000 pcu per day for Anggerek Nelimurni Flyover and Kapten Tendean Flyover.

The improved sections and flyovers constructed by this project package have been kept in fairly good condition. This has physically supported the project effectiveness to generate as mentioned above. (cf. 2.5.1-b. for the detail of road conditions.)

(2.3.2) Travel Speed and Access Time

Local Road

According to the public works section of the kabupaten governments, vehicles can run at speeds of 60 to 80 km per hour on local roads if the road is paved and in good condition. On a gravel road or paved road in bad condition, speeds will be reduced to 20 to 30 km per hour. Cars can be operated at 10 to 20 km per hour on an earth road; however they often become impassable in the rainy season.

The relationship between the above-mentioned current road condition and the results of this project intervention is not proven since it is very difficult to identify the road sections that this project covered, due to the lack of information resources in the executing agencies and other relevant public administration offices. (Road conditions will be discussed in detail in 2.5.1-b.)

Urban Road

It is essential to provide major intersections with grade separation facilities, such as flyovers and underpasses, for an at-level toll road with access control not to block other traffic flows across itself. Such facilities are considered part of a toll road system. Thus most facilities funded by the urban road package of this project should be considered as a part of Jakarta Area's toll road system.

Traffic flows were much improved at three flyovers constructed under this project. The package includes construction of a side road, to accommodate a part of the South-West Arc (Toman – Grogol), and the Cengkareng access road extension, which will comprise a section of the Jakarta Harbor Toll Road. Construction of Kemayoran Access road gave local residents easy access to Jakarta Harbor Road. By virtue of these projects, travel time was reduced significantly, as shown in Table 2.

Table 2: Travel Time

Road Section	Before Completion (1994)	After Completion (2000)
Jkt IC – Cengkareng Access	60 minutes	25 minutes by toll road
Kemayoran – Jkt Harbor Road	50 minutes	25 minutes by toll road

(2.3.3) Internal Rate of Return

Local Road

In this project, road links designated for improvement were estimated to have an EIRR over 10%.

Owing to rapid motorization during the 1990s, traffic volumes forecast in 1987 were underestimated in most kabupatens. Vehicle numbers actually increased by over 8% per annum in most provinces, while traffic on local roads was assumed to be growing at 4.2 % to 6.4% p.a. for four visited kabupatens taking into account the relationship between vehicle number growth and traffic growth. Using these traffic growth figures, EIRRs are re-estimated as shown in Table 3. The resulting of re-estimation range from 14% to 43%, satisfying the original selection criterion.

Table 3: Re-estimation of Economic IRR

Kabupaten	IRR (%)	
	Original	Re-estimated
Musi Rawas	Over 10%	42.9
Musi Banyuasin	Over 10%	17.2
Gowa	Over 10%	24.7
Pangkep	Over 10%	13.6

Urban Road

The urban road package includes seven projects aimed at mitigating traffic congestion at critical points and attaining effective use of the toll road system, especially of the South-West Arc. This package was composed to meet an urgent need, and without conducting an economic evaluation of the component projects individually. Instead, the EIRR of the entire South-West Arc was referred to in the appraisal report. The EIRR was estimated at 27.7%; because of this high figure, it was thought that a high economic impact of the package was expected.

In the evaluation of the South-West Arc, the traffic growth rate was assumed to be 3% per annum at the time of appraisal. Since 1993, however, traffic in the Inner Jakarta area has actually grown 6.5% annually, according to a traffic count in 2000 conducted for the aforementioned JICA Study. If this high growth is incorporated into the EIRR recalculation, the South-West Arc Project will be more beneficial and the EIRR rises to 31.7%, 4.0 points higher than the original.

2.4 Impact

(2.4.1) Impacts on Agricultural Production

One of the main objectives of the local road project was to reduce transport costs, increase farmer incomes and thereby encourage agricultural production by providing a better road network.

Table 4: Rice Production in Indonesia

Production (1000metric ton)

	1988	1990	1992	1994	1996	1998	1999
Project Province	7,859	8,625	9,802	9,719	11,418	10,350	11,061
Other Province out of Java	8,768	9,416	10,195	10,400	11,287	11,184	11,494
Java excl.Jakarta	25,050	27,138	28,243	26,523	28,397	27,703	27,848
Indonesia	41,676	45,179	48,240	46,642	51,102	49,237	50,402

Growth Rate (1988=100)

	1988	1990	1992	1994	1996	1998	1999
Project Provinces	100	110	125	124	145	132	141
Other Provinces out of Java	100	107	116	119	129	128	131
Java excluding Jakarta	100	108	113	106	113	111	111
Indonesia	100	108	116	112	123	118	121

Source: Statistical Yearbook Indonesia 1991,1995,1999

Table 4 compares rice production in the 10 project provinces with others since completion of the project. Provinces where the project was implemented show higher growth rates . Although it is not clear to what extent it can be attributed to the road project, there was a high growth of rice production in the last decade.

(2.4.2) Impacts on Environment

The improvement and maintenance component for the local road package of this project did not include new road construction, but rather dealt with existing local roads. There were no negative environmental impacts reported.

Because of the urban road package, several critical bottle necks were resolved, and congestion was mitigated. Still, new congestion-prone points were created near toll road ramps. There is a possibility that it may have raised negative environmental impacts, however, due to a lack of data, it needs further research in this regard.

(2.4.3) Involuntary Resettlement Issue

In regard of the local road component, no problem has been reported on inhabitant resettlement issue.

In regard of the urban road component, while most squatters on the Kemayoran Access Road site resettled as planned, fifteen households (approximately 6%) out of 234 claimed for higher levels of monetary compensation. This case was finally settled in court in two years.

(2.4.4) Impacts on Rural Industry and Life

The local road projects widely improved access to urban areas for rural residents. In the rainy season, earth roads had become impassable by bicycle and sometimes by car, leaving rural areas isolated. Paving local roads solved this problem. Furthermore, factories using local materials were located in the rural areas. In the case of Kab. Pangkep in South Sulawesi, one masonry and two cement factories were built after the project was implemented, creating job opportunities for village inhabitants. Paved roads also led to the expansion of bus service areas, making it more convenient for rural people to commute to urban areas and to schools, hospitals, markets and other destinations near the transport routes.

2.5 Sustainability

(2.5.1) Operations and Maintenance

a. Organization

Local Road

The Provincial Department of Public Works (DPUP) is in charge of maintenance works for national and provincial roads, while the Kabupaten Department of Public Works (DPUK) is responsible for improvement and maintenance of kabupaten roads, which are the main concern of this project package. The local road component has been maintained by the DPUKs. Maintenance equipment supplied to the Bina Marga for this project was rented to contractors and operators, via the DPUKs. Thus, the DPUKs played the primary role in this project.

Urban Road in Jakarta

Two agencies are in charge of urban road maintenance: the Department of Urban Transport Infrastructure (DUTI), under the Ministry of Settlements and Regional Infrastructure, and the Sub-Dinas Bina Marga of DKI Jakarta. The former maintains the primary arterial and collector roads, while the latter covers the second arterial and collector roads. Toll roads are operated and maintained by PT. JASA MARGA (Indonesian Highway Corporation). Each of the seven projects is maintained by the agency shown in Table 5. Five projects involved construction or improvement of secondary and local roads; since completion they have been maintained by the Road Division of DKI Jakarta.

Table 5: Agencies responsible for Maintenance of Urban Road Projects

Urban Road Project		Road Classification	Agency responsible for Maintenance
1	Anggrek Nelimurni flyover	Local road	Road Div. DKI Jakarta
2	Mampang, Kapten Tendean flyover	Secondary collector	Road Div. DKI Jakarta
3	Road drainage improvement near Kuningan Crossing Point	Secondary collector	Road Div. DKI Jakarta
4	Kebon Juruk bridge	Local road	Road Div. DKI Jakarta
5	Toman-Grogol side road construction	Primary Road	DUTI, Bina Marga
6	Pluit-Jembaten Tiga speedway	Toll road	PT. JASA MARGA
7	Kemayoran Development Area access road	Local road	Road Div. DKI Jakarta

b. Current Conditions

Local Road

In this post evaluation study, four Kabupatens were selected for site visits: Kab. Musi Rawas and Kab. Musi Banyuasin of South Sumatra Province, and Kab. Gowa and Kab. Pangkep of South Sulawesi Province. Present road conditions of those kabupatens are summarized in Table 6.

Even in 2001, the percentage of asphalted road is not so high -- 22% to 42% -- except for Kab. Pangkek (82%), which is located near the Provincial Capital, Ujung Pandang. As for those three Kabupatens, more than 70% of gravel roads and earth roads are in bad or very bad condition. Even so, the ratio of improved road length as a good or fair road condition, ranging from 22% to

79% with a weighted average of approximately 50%, seems to have increased significantly since project appraisal, when it was 20% on average.

Table 6: Situation of Kabupaten Roads in selected Kabupatens in 2001

Road Surface Type	Road Condition	South Sumatra		South Sulawesi	
		Kab. Musi Rawas	Kab. Musi Banyuasin	Kab. Gowa	Kab. Pangkep
Asphalt	Good	194.4	176.7	66.7	232.8
	Fair	284.1	150.5		173.6
	Bad	134.9	76.6	177.3	36.5
	Very Bad	45.6	-	145.4	2.0
	Sub Total	659.0	403.8	389.4	444.9
Gravel/Stone	Good	23.5	41.7	331.2	2.0
	Fair	144.2	-		17.0
	Bad	107.3	158.3		29.3
	Very Bad	146.0	40.3		10.5
	Sub Total	421.0	240.3	331.2	58.7
Earth	Good	5.0	102.1	983.9	0.0
	Fair	24.0	236.3		0.0
	Bad	181.5	310.3		29.6
	Very Bad	286.5	142.9		5.6
	Sub Total	497.0	791.6	983.9	35.2
Total Length		1,577.0	1,435.7	1,704.5	538.8
% of Good or Fair to Total Length		42.8	49.3	22.0	78.9
% of Asphalt to Total Length		41.8	28.1	22.8	82.6

Source: Each Kabupaten Department of Public Works (DPUK)

Urban Road

Improved sections and flyovers constructed by this project package are still new and kept in fairly good condition, without serious problem. In general, primary roads are comparatively well maintained, while secondary roads are in poor condition (sporadic potholes), heavily congested with public transport vehicles, and used frequently by street-vendors and pedicab (becak) drivers.

(2.5.2) Technical Capacity

As the result of a national policy of decentralization (Autonomi Daerah), the DPUK became independently responsible for planning, construction, improvement and maintenance of kabupaten roads. Along with this regional reform, a personnel change has been made, transferring officials and staff, including engineers, from the Provincial Governments to the DPUKs. However, the Provincial Governments themselves do not have enough personnel capacity, so most DPUKs suffer staff

shortages, especially of personnel with technical ability. For instance, there are 41 persons in the maintenance section of the DPUK of Kabupaten Pangkep in South Sulawesi. The number seems large enough to maintain the total kabupaten road network of 580km, but Pangkep is reportedly suffering from a shortage of engineers, mechanics and technicians, as well as shortages in budget and equipment. Pangkep DPUK has only one excavator and two graders, with no spare parts and no mechanics. Thus, most maintenance is stopped if the machines are out of order. Kab. Musi Banyuasin in South Sumatra also is running short in equipment.

As for the upkeep of each kabupaten road, routine maintenance works including grass cutting, asphalt patching, checking and cleaning of drains, which is implemented by the DPUK itself. Periodic maintenance works including slope protection, overlay and drainage rehabilitation, which are contracted out.

The Sub-Dinas Bina Marga of DKI Jakarta has the same problems of personnel shortage: There are 40 maintenance staff members, which may be insufficient to cover the vast DKI Jakarta area.

(2.5.3) Financial Status

The kabupaten governments manage the budget and equipment for all kabupaten roads. There are two budget resources: an internal budget and a subsidiary budget from the Central/Provincial Government. As the latter is not sufficient in most cases, the decentralization policy will likely expand regional disparities between rich and poor kabupatens.

Table 7 shows the standard budget allocations for local road maintenance and improvement in Kab. Gowa. In other Kabupatens, a similar standard is adopted. However, the actual budget is often far less.

Table 7: Standard Budget for Local Road Maintenance and Improvement(in the case of Kab. Gowa)

Works	Application	Standard Budget
Routine Maintenance	Sections with less than 20% bad conditioned road	Rp 7.5 million/km/yr
Periodic Maintenance	Sections with 20% - 60% bad conditioned road	Rp 45million/km/3yr
Improvement	Sections with more than 60% bad conditioned road	Rp 125 – 400 million/km/5 yr

Source: Hearing at DPUK, Gowa

The actual budget in 2000 for local roads was Rp 1,600 million in Kab. Pangkep, South Sulawesi, for a 538 km Kabupaten road; that is, Rp 3.0 million per kilometer. There was an allocation of Rp 8,330 million in Kab. Musi Banyuasin, South Sumatra for 1,435 km road, or Rp 5.8 million per kilometer. Every Kabupaten is suffering from funding shortages, which affect budget, provision of equipment and materials, and ability to hire skilled labor.

(2.5.4) Overall Sustainability

Local Road

Because of the decentralization policy, each kabupaten has become independently responsible for overall aspects of the project roads.

Taking into account the shortages in technical capability, equipment and budgets for the maintenance work, the overall sustainability of the project is not assured at this moment. Accordingly, it is important for the provincial or central government to provide assistance / advice in a timely manner in order to maintain project effectiveness.

Urban Road

Most of the urban roads in the project are to be maintained under the responsibility of DKI Jakarta. All the project roads are effectively utilized at present. For the time being, no critical problems are expected on the project roads, however periodical maintenance or repair work will be required after several years.

The responsible section has sufficient experience in maintaining such structures as used in the flyovers in this project. However, the number of staff and the maintenance budget seem to be insufficient to maintain the vast numbers of roads and bridges in Jakarta.

The sustainability of the project roads in the long term, therefore, depends on DKI Jakarta's reinforcement of the road maintenance system.

3. Lessons Learned

None.

4. Recommendations

None.

Comparison of Original Plan and Actual Scope

Item	Plan	Actual	
Project Scope			
1. Local roads and bridges			
a) Improvement			
i) Riau	28.2 km	No data available	
ii) Sumatera Selatan	152.5 km, 105 m		
iii) Lampung	30.5 km		
iv) Kalimantan Tengah	101.8 km		
v) Kalimantan Timur	116.15 km, 100 m		
vi) Kalimantan Selatan	346.7 km, 724.5 km		
vii) Nusa Tenggara Timur	93 km		
viii) Sulawesi Utara	22 km		
ix) Sulawesi Selatan	259.4 km, 211 m		
x) Sulawesi Tenggara	39 km, 180 m		
b) Maintenance of local roads			
i) Riau	648.06 km		
ii) Sumatera Selatan	368.95 km		
iii) Lampung	303.56 km		
iv) Kalimantan Tengah	151 km		
v) Kalimantan Timur	382.2 km, 416 m		
vi) Kalimantan Selatan	529.67 km, 70 m		
vii) Nusa Tenggara Timur	509 km, 123 m		
viii) Sulawesi Utara	99.8 km		
ix) Sulawesi Selatan	648.86 km		
x) Sulawesi Tenggara	119.9 km		
c) Procurement of roads maintenance equipment			
i) Bulldozer 70 Hp (Swamp)	8	8	
ii) Motor grader	7	6	(-1)
iii) Excator 0.4m ³ (Crawler swamp)	6	9	(+3)
iv) Excator 0. 4m ³ (Wheel)	12	12	
v) Vibratory roller 4 ton	39	39	
vi) Plate compactor	76	78	(+2)
vii) Wheel roader 1.2 m ³	22	6	(-16)
viii) Dump truck 3.5 ton	117	97	(-20)
ix) Dump truck 2 ton	20	20	
x) Pick up truck AWD	39	40	(+1)
xi) Service equipment pick up 4WD	39	39	
xii) Asphalt Sprayer (200 Ltr)	39	39	
xiii) Stone cruiser (Trailer)	12	0	(-12)
xiv) Concrete mixer (Trailer)	39	39	
xv) Safety signs & Walking Talkie	39	39	
xvi) Survey equipment	39	39	
xvii) Material testing equipment	39	39	
xviii) Drafting equipment	39	39	
xix) Workshop equipment	39	39	
xx) Radio comm. system	40	39	(-1)
xxi) Spare parts	-		
2. Urban roads			
a) Anggrek Nelimurni flyover Construction	Flyover of both ways (4 lane) crossing south and west ark and installation road 677m (including 233m bridge)	Road 677m (bridge 240m) Bridge (+7m)	

b) Mampang, Kapten Tendean flyover construction and Kuningan crossing point improvement	Ramp construction from Jl Kapten Tendean to south way of south west ark 395m (2 lanes)	325m(+70m)
	Flyover construction and traffic signal improvement 240m (4 lanes)	278m (+38m)
	Channelization and traffic signal improvement of Kuningan crossing point	Cancelled
c) Road drainage facility improvement of north west part from Kuningan crossing point	0.8m and 1.5m 3km	Cancelled
d) Kebon Juruk bridge passing on the existing Jakarta-Tangeran speedway	250m (including 60m bridge) 7m wide (2 lanes)	Road 250m (bridge 58m) Bridge (+2.0m)
e) Tomang-Grogol side road construction	West side road (3 lanes) 1.50km (including 615m bridge)	2.0km(bridge 750m) road +500m, bridge+135m
	The flyover extension to 6 lanes from 4 lanes	
f) Pluit-Jembatentiga speedway construction	Chengkareng access road extension 3.07km including 2 interchanges 6lanes	3.07km, 2 interchanges
g) Kemayoran development area access road construction	1.08km (including bridge 470m) 4 lanes	road 1.08km (bridge 389m) bridge –81m
3. Consulting Services - Construction supervision - D/D making - Tender document making - Technical guide - Training at sites - etc.	1,462 M/M (Local roads: Pro(A) 162 M/M) (: Pro(B) 720 M/M) (Urban roads :Pro(A) 190 M/M) (:Pro(B) 350 M/M)	Pro (A) 245M/M (+55M/M) Pro (B) 956M/M (+606M/M)
Implementation Schedule 1. Local Roads - Selection of Consultant - Tendering - Road works - Tendering for Equipment - Installation of Equipment - Consulting Services	June 1990 – May 1991 Sept.1990 – Aug.1991 Sept.1991 – Feb.1993 Oct.1990 – March 1991 April 1991 – Sept.1991 June 1991 – Feb.1993	June 1990 – 1994 For planned projects and May 1993 – Feb. 1994 For additional two Kabupatens in Flores
2. Urban Roads Selection of Consultant a) Anggrek Flyover - Tendering - Construction - Engineering Service b) Mampang-K.Tendean flyover - D/D - Tendering - Construction - Engineering Service	July 1990 – June 1991 Oct.1990 – Sept.1991 Oct.1991 – Aug.1993 Oct.1991 – Aug.1993 July 1991 – July 1992 May 1992 – April 1993 May 1993 – Feb.1995 July 1991 – Feb.1995	 July 1992 – Jan.1994 May 1992 – Feb. 1994 May 1993 – Jun. 1995 Mar. 1993 – July 1995

c) Kebon Juruk flyover		
- D/D	July 1991 – July 1992	
- Tendering	May 1992 – April 1993	
- Construction	May 1993 – Oct.1994	July 1992 – Jan. 1994
- Engineering service	July 1991 – Feb.1995	May 1992 – Feb. 1994
d) Tomang –Grogol		
- Tendering	Oct.1990 – Sept.1991	
- Construction	Oct.1991 – Sept.1994	May 1992 – Nov. 1994
- Engineering service	Oct.1991 – Sept.1994	Apr. 1992 – Dec. 1994
e) Pluit – Jbt.Tiga		
- Tendering	Oct.1990 – Sept.1991	
- Construction	Oct.1991 – Sept.1994	May 1992 – Nov. 1994
- Engineering service	Oct.1991 – Sept.1994	Apr. 1992 – Dec. 1994
f) Kemayoran Access		
- Tendering	Oct.1990 – Sept.1991	
- Construction	Oct.1991 – Sept.1994	May 1994 – July 1999
- Engineering service	Oct.1991 – Sept.1994	Apr. 1994 – July 1999
Project Cost		
Foreign currency	9,334 million yen	Data not available
Local currency	10,398 million yen	Data not available
Total	19,732 million yen	Data not available
ODA Loan Portion	16,772 million yen	15,866 million yen
Exchange Rate	1Rp. = 0.08 yen	-

Independent Evaluator's Opinion on Local and Urban Road Development Project

Raymond Atje*

Senior Researcher, Department of Economics, CSIS, Jakarta

We second the report's assertion that the objectives of the program are still relevant. With regard to rural local roads, it may be argued that they will become even more important as the government trying to provide remote areas with greater access to market, to various resources and public services. Similarly, the urban roads in Jakarta are as important today as they were when the project was initiated in reducing traffic congestions in the neighborhoods of the roads under consideration.

The report states that the project resulted in positive economic and social impacts. That might have been the case, but the report provides only circumstantial evidences to support the claim. For instance, the report argues that as a result of the project the growth rates of rice production in the 10 project provinces are higher than in other provinces. This argument is not very convincing, however, as there are other factors that might have contributed to higher growth of rice production than improvement in the road conditions. It might be the case that more land had been converted to rice field, or that farmers had used better method to produce rice. Otherwise, the surveyor could come up with a more rigorous quantitative analysis such a regression analysis to establish the relationship between an increase productivity and road condition. Several other indicators, such as, reduction in transportation cost or traveling time saved due to the project are, in our opinion, better measures of positive economic impacts of the project than the one mentioned above. These indicators are available in the report.

Indirect economic (job creation, increased presence of factories) impact and social impacts is nicely outlined in the survey result. However, once again, the surveyor could not come up with rigorous quantitative analysis to back up his arguments. Moreover, during the field survey the surveyor could have asked stakeholders, such as local communities, about the impacts of the project on their daily life.

On the resettlement of over 200 households from the location of the Kebayoran Access Road, it is quite difficult to determine whether or not the settlement of the issue had been achieved without coercion. It should be mentioned that the applications of coercive methods to resettle people were quite prevalent during the period under consideration. However, given the fact all the pending cases had been settled in court, there is no reason to believe that there had been involuntary resettlement in this case.

* I have benefited from discussions with Ms Titik Anas who has been kind enough to provide some insightful comments about the report. The usual disclaimer applied.