

APPENDIX

MINUTES OF MEETING ON THE INCEPTION REPORT

JICA Study Team for the "Study on Integrated Transportation System Improvement by Railway and Feeder Service in JABOTABEK Area (hereinafter referred to as "the Study") submitted and explained the Inception Report to the Ministry of Communication (MOC). MOC, considering the major points included in the Report, accepted it in principle.

The points of discussion between MOC and JICA Study Team are as follows:

1. The followings have been agreed between MOC and JICA Study Team.

(1) One Steering Committee and one counterpart team will be set up so that effective coordination could be realized between the Study of Transport Network Planning and Regulation by IBRD (hereinafter referred to as "IBRD Study ") and JICA Study.

Considering that one counterpart team must work for two study teams sometimes concurrently, MOC should organize the counterpart team effectively so as to ensure the smooth implementation of the Study.

(2) In addition to the conventional railway system, studies on other types of guided transit system should be taken into consideration in carrying out the Study.

(3) Investment schedule for Master Plan for integrated transportation system should be prepared taking into consideration the time framework of National 5 Years Development Plans of Government of Indonesia.

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(4) Preconditions necessary for demand forecast including the preliminary proposal as shown in Annex for improvement cases for railway and road at 2005 to form alternative patterns for Master Plan, should be discussed and finalized within one month from the date of signing of the Minutes, so that the Study could be implemented effectively according to the time schedule included in the Inception Report.

(5) The reports to be reviewed and referred to should include the followings in addition to those mentioned in the Inception Report.

(a) Traffic Management and Road Network Development Study

(Buchanan and Associates, 1983)

(b) Jakarta Urban Transport Project (Pamintori 1987)

(6) The beginning of the time frame for the Study should be 1990.

2. The following has been requested by MOC to JICA Study Team. However, this is considered to be out of Scope of Work agreed upon between MOC and JICA on February 2, 1988. JICA Study Team will convey this request to the Government of Japan.

Instead of implementation status of Railway Master Program at 1992 described in the item 7 of Minutes of Meeting on the Study signed by MOC and JICA Preliminary Study Team on February 2, 1988, the following two options for implementation status for railway projects at 1992 should be considered and the evaluation of the two options should be carried out including the necessary demand forecast.

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In this case, after the evaluation of these two options, further study should be carried out based on the only one selected option.

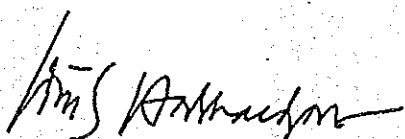
(a) The first option should represent a do-minimum situation in which only committed and on-going expenditures including domestic currency portions would be considered for JABOTABEK Railway Project.

(b) The second option should consider the implementation status of JABOTABEK Railway Project in which the minimum investment necessary for achieving the service level of 6 minutes train interval on Central Line, 10 minutes train interval on extended Loop Line, 15 minutes on Serpong Line, 20 minutes on Tangerang Line, 20 minutes on Tanjung Priok Line would be considered.

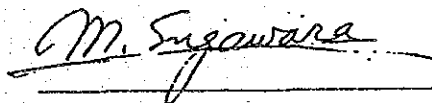
This investment would include the minimum expenditures necessary for ground facilities which are indicated in the Rational Execution Plan and the expenditures for the minimum number of rolling stock necessary for achieving the above service level.

In Jakarta, Indonesia

December 5, 1988



Ir. Giri S. Hadihardjono HSE
Director General of Land
Transport and Inland Waterways
Ministry of Communication

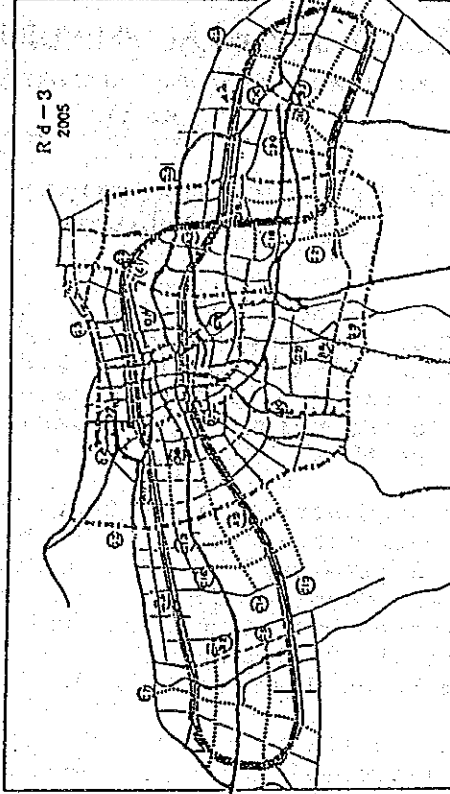
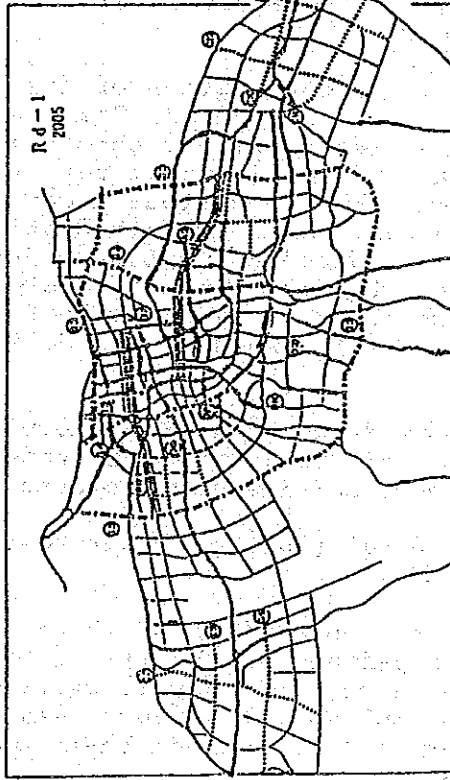
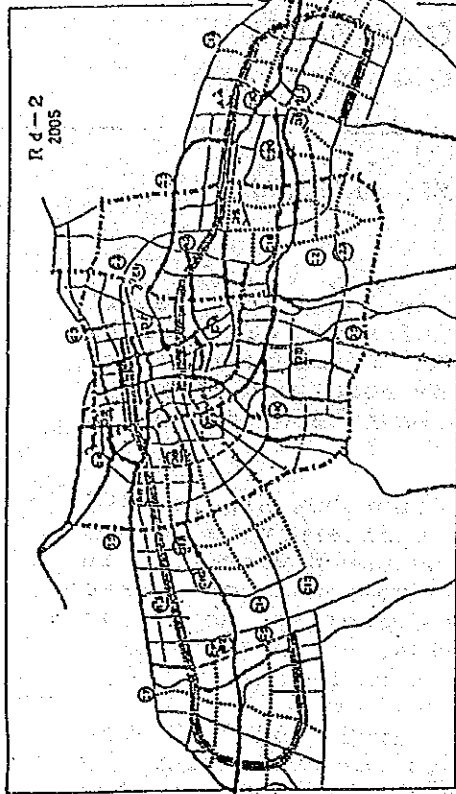
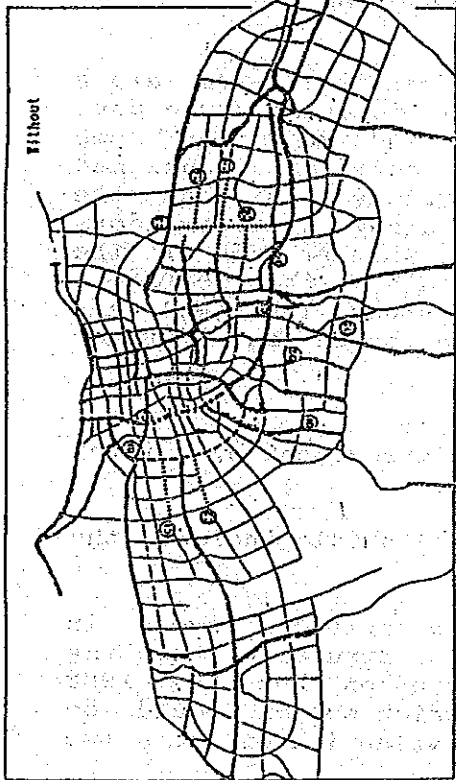


Dr. Misao Sugawara
Leader of JICA Study Team

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Preliminary Proposal for Improvement Cases for Railway and Road in 2005 vs. Form Alternative Patterns

Improvement Case	Railway	Improvement Case	Road
<p>Ry 1</p> <p>Complete the minimum facilities necessary for achieving the service of 6 minutes interval on C/L, 10 minutes interval on Kerak Line and 15 minutes on Tangerang Line</p>	<p>1. Improvement of track on Tangerang Line</p> <p>2. Improvement of track on Merak Line (Tengahbang-Serpong)</p> <p>3. Grade separation at Manggarai Station</p> <p>4. Track elevation of C/L (Kota-Manggarai)</p> <p>5. Automatic signalling on E/L</p> <p>6. Automatic signalling on W/L</p> <p>7. Installation of ATS</p> <p>8. Improvement of passenger handling facilities (Jatinegara, Paser Senen, Tanahabang, Duri, Kemayoran)</p> <p>9. Improvement of passenger handling facilities (at other st.)</p> <p>10. Improvement of Keagung Dandan Station</p> <p>11. Improvement of track of Tanjungpriok Line</p> <p>12. Improvement of feeder service (station plaza, bus bay, approach roads, etc)</p> <p>13. Construction of new station</p> <p>14. Investment on Manggarai Workshop (2nd step)</p> <p>15. Construction of Depot Depot (1st step)</p> <p>16. Construction of Sub-Depot (Merak Line, Bekasi Line)</p> <p>17. Establishment of Train operating system (Manggarai st.)</p> <p>18. Increase of necessary number of rolling stock</p>	<p>Rd 1</p> <p>Complete the highest priority programs proposed by ARSDS to improve: (a) the arterial road/street network within the Outer Ring Road; (b) the street systems within the future urban areas of Tangerang/Bekasi Core-Cities.</p> <p>But only the existing free-ways/arterial roads will be available for the direct access from Tangerang/Bekasi areas to the Central Area.</p>	<p>1. Completion of the urban free-way network, i.e. the Inner Ring Road, Outer Ring Road and Harbour Road</p> <p>2. Improvement of the road/street network within the Outer Ring Road to solve the present traffic problems</p> <p>3. Construction of two routes of Mass Transit Corridor from the city-center to the Outer Ring Road to provide the direct access from the East/West Jakarta to the Central Area.</p> <p>4. Mass Transit Corridor will provide exclusive busways and arterial streets in a joint right-of-way</p> <p>5. Development of street system within the East/West Jakarta and within the Tangerang/Bekasi Core-cities</p>
<p>Ry 2</p> <p>Complete the necessary facilities for achieving the service level of 3 minutes interval on C/L, 6 minutes on Kerak Line, 10 minutes on Kerak Line, 15 minutes on Tangerang Line</p>	<p>In addition to the completion of the facilities of Ry1, the following facilities will be completed.</p> <p>1. Relocation of Kota-Station</p> <p>2. Construction of car-depot in relation to Kota-Station</p> <p>3. Double tracking and electrification of C/L</p> <p>4. Track elevation of E/L (Kota-Ganzsontong)</p> <p>5. Flyover on W/L</p> <p>6. Improvement of passenger handling facilities</p> <p>7. Construction of new stations</p> <p>8. Improvement of feeder service (station plaza, bus bay, approach road, etc)</p> <p>9. Electrification, automatic signalling on Tangerang Line</p> <p>10. Electrification and automatic signalling on Merak Line</p> <p>11. Increase of necessary number of rolling stock</p>	<p>Rd 2</p> <p>In addition to Rd 1, complete the high priority program proposed by ARSDS to improve: (a) the direct access from Tangerang/Bekasi Core-Cities to the Central Area; (b) the road/street systems within the southeast/southwest areas outside of the Outer Ring Road</p>	<p>The improvements to be added to Rd 1 are:</p> <p>1. Extension of Mass Transit Corridors to provide the direct access from the Tangerang/Bekasi Core-Cities to the Central Area</p> <p>2. Provision of the road/street systems within the southeast/southwest suburbs</p>
<p>Ry 3</p> <p>Complete the facilities necessary for achieving 3 minutes interval on C/L, 6 minutes on Circular Line, 10 minutes on Kerak Line, 15 minutes on Tangerang Line</p>	<p>In addition to the completion of the facilities of Ry2, the following will be completed.</p> <p>1. Tangerang Line Extension (Tangerang-Karawaci)</p> <p>2. New line construction (Sudirman-Thamrin-Kota)</p>	<p>Rd 3</p> <p>Complete the full-scale development of the arterial road system (up to 2005) proposed by ARSDS. Additional works will improve mainly: (a) direct access from the southeast/southwest suburbs to the Central Area; (b) North-South Axes between the Central Area and the South Jakarta.</p>	<p>The improvements to added to Rd 2 are:</p> <p>1. Development of the remaining routes of Mass Transit Corridors to provide the direct access for above-mentioned areas; as a result, all the Mass Transportation developed will be connected and be a loop tested</p> <p>2. Strengthening the North-South Axis within the DKI area</p>
<p>Beyond 2005</p>	<p>In addition to the completion of the facilities of Ry3, the following will be completed.</p> <p>1. Construction of Cibinong Line</p> <p>2. New line construction (Tengahbang-Gabir-Pasar Senen)</p> <p>3. New line construction between airport and DKI</p>		



RECOMMENDED ROADS BY SEVER CLASSIFICATIONS OF PROGRAMS

- LEGEND
- ▬ MASS TRANSPORTATION CORRIDOR DEVELOPMENT PROGRAM
 - ▬ EAST-WEST CONNECTION IMPROVEMENT PROGRAM IN THE CENTRAL AREA
 - ▬ MAJOR ARTERIAL STREET DEVELOPMENT PROGRAM
 - ▬ SOUTH-NORTH AXIS STRENGTHENING PROGRAM IN THE CENTRAL AREA
 - ▬ ARTERIAL STREET DEVELOPMENT PROGRAM IN THE NEWLY URBANIZING AREA
 - ▬ PRESENT TRAFFIC PROBLEM ORIGINATED PROGRAM
 - ▬ MIDWAY FREIGHTWAY DEVELOPMENT PROGRAM

EXISTING ROADS

- ▬ EXISTING ROAD AND STREET AVAILABLE FOR 2005



Improvement Case for Road



**DEPARTEMEN PERHUBUNGAN
DIREKTORAT JENDERAL PERHUBUNGAN DARAT**

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JAKARTA

**MINUTES OF MEETING ON IMPROVEMENT CASES PROPOSAL
(January - February 1989)**

Subsequent to the agreed Minutes of Meeting on Inception Report (December 5, 1988) a series of formal and informal discussions were made between JICA Study Team and the Counterpart Team regarding the proposed alternative cases for road and railway network. The following points of discussions have been raised and accepted by both parties.

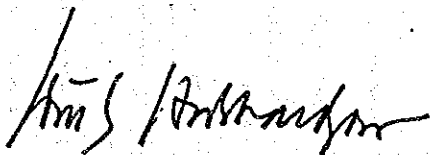
- (1) In formulating Master Plan at 2005 for Jabotabek Area, JICA Study Team will carry out evaluation of 6 alternative cases in stead of 9 alternative cases which have been proposed in the Inception Report. The 6 cases are composed of three railway improvement options and two base cases as shown in the Appendix 1, 2(1) and 2(2). The evaluation method of 6 cases should be as described in the Inception Report.
- (2) The proposed levels of service for Ry-1, Ry-2 and Ry-3 are accepted as reasonable alternative targets for evaluation by the counterparts. But some assessment would be made on the relative importance of each separate component (which constitutes each services levels) in achieving the proposed service levels.
- (3) With respect to constuction of Mass Transit System along major corridors, JICA Study Team will forecast transport demand along the corridors concerned, and recommend some suitable Mass Transit System for the corridors concerned depending on the forecasted demand volume. In case the construction of Mass Transit System along the corridors concerned is judged as urgent project, whether F/S of the construction of Mass Transit System along the corridors concerned should be carried out by both study, TNPR (*1) and JICA Study (*2), should be decided based on further discussion.
 - (*1) Transport Network Planning Regulation.
 - (*2) Intergrated Transportation System Improvement by Railway and feeder Service in Jabotabek Area.
- (4) Base case BC-00 ('without improvement') should include the completion of :
 - (a) One of the two options of the railway services levels in 1992, as defined in the item 2 of the Minutes of Meeting on the Inception Report agreed upon on Dec. 5, 1988 between MOC and JICA Study Team. Which option should be selected will be decided based on evaluation of these two options.

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- (b) On-going and committed road construction projects; and
(c) traffic management and parking policy implementation project, improved level of services of bus transport system, and the development of Mass Transit System on Blok M - Sudirman - Thamrin - Kota corridor. The on-going and committed projects should be defined through further discussion with related agencies, and examination of the current status of projects development within Jabotabek Area.

- (5) Both parties agreed to the importance of justifying the assumptions that are incorporated in the transport demand model formula, and likely implications of the assumptions on the result of their evaluation, and of the sensitivity of the evaluation to different assumptions and future scenarios. However, JICA Study Team, within the time frame of time schedule described in the Inception Report, which was accepted through Minutes of Meeting Agreed upon on Dec. 5, 1988, between MOC and JICA Study Team, will carry out the demand forecast in the standard way, through working papers necessary for discussions with the Counterpart Team based on the premises which include basic socio-economic conditions and fundamental transport service levels. These premises for demand forecast should be agreed upon between MOC and JICA Study Team.
JICA Study Team will also carry out suitable sensitivity analysis with respect to economic evaluation of the proposed plans.

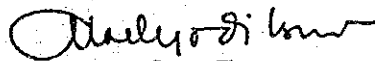
Jakarta, February 15, 1989



Ir. Giri S. Hadihardjono, MSE
Director General of Land
Transport and Inland Waterways
Ministry of Communication



Kunitaka Namikawa
Acting leader of
JICA Study Team



Ir. Mulyadi Hadikusumo
Coordinator of Counterpart

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RAILWAY IMPROVEMENT CASES

IMPROVEMENT CASE	PROJECT ITEM	REMARKS
<p>Ry 0 (to be included in SC-02)</p> <p>Ry 1</p> <p>Complete the minimum facilities necessary for achieving the service of 6 minutes interval on C.L. 18 minutes interval on Extended Loop Line, 15 minutes on Serpong Line and 28 minutes on Tangerang Line.</p>	<p>(a) or (b) items to be taken up from the below</p> <ol style="list-style-type: none"> 1. Track elevation and automatic signalling of C.L. Kota - Hri 2. Automatic signalling on C.L. 3. Automatic signalling on U.L. 4. Electrification and automatic signalling on Serpong Line. (including Srp-Sub-Depot) 5. Electrification and automatic signalling on Bekasi Line. (including Bks-Sub-Depot) 6. Double tracking, Electrification and Automatic Signalling on C.L. Hri-Bp 7. Automatic signalling for single track on C.L. Hri-Boc 8. Improvement of Keping Bandan Station. 9. Improvement of feeder service station plaza included in noi.no5.no8 10. Establishment of Train operating system. 11. Rolling stock (EE, 44 cars) 12. Grade separation at Tangerang Station. 13. Automatic signalling on Tangerang Line. (including Tng-Sub-Depot) 14. Improvement of passenger handling facilities, such as platform elevation and widening. Ung. Pas. Thab 15. Investment of on Tangerang workshop. (3rd step) 16. Construction of Depot Depot. 17. Increase of necessary number of rolling stock. 18. Double tracking, Electrification and Automatic Signalling on C.L. Dp-Boc 19. Improvement of feeder service station plaza, bus bay, approach roads, etc) 20. Increase of necessary number of rolling stock. 	<p>(a) On-going and committed projects</p> <p>(b) Projects for Rationalized Execution Plan</p>
<p>Ry 2</p> <p>Complete the necessary facilities for achieving the service level of 3 minutes interval on C.L. 6 minutes on Extended Loop Line, 18 minutes on Serpong Line, 15 minutes on Tangerang Line.</p>	<p>In addition to the completion of the facilities of Ry 1, the following facilities will be completed.</p> <ol style="list-style-type: none"> 1. Relocation of Kota-Station. 2. Construction of car-depot in relation to Kota-Station. 3. Track elevation of Et. Kota-Serponglang) 4. Flyover on U.L. 5. Improvement of passenger handling facilities. 6. Construction of new station. 7. Improvement of feeder service station plaza, bus bay, approach road, etc) 8. Electrification on Tangerang Line. 9. Double Tracking of Serpong Line. 10. Increase of necessary number of rolling stock. 	
<p>Ry 3</p> <p>Maintain the same levels of service as Ry 2 for increased passenger.</p>	<p>In addition to the completion of the facilities of Ry 2, the following will be completed.</p> <ol style="list-style-type: none"> 1. Improvement of other facilities such as small stations. 2. Construction of Cibirong Line. 3. Increase of necessary number of rolling stock. 	

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Base Cases

BC-00 (1992)

1. R_y 0
2. Completion of the traffic management program and parking policy implementation project, and improved level of service for bus transport system.
3. Completion of the on-going and committed road construction project within Jabotabek Region (JUTP, JUDP-I and Toll roads), and the development of mass transit system on Blok M-Sudirman-Thamrin-Kota corridor.

BC-01 (2005)

BC-00 with the additional improvements of

1. Completion of the urban free-way network, i.e. the Inner Ring Road, Outer Ring Road and Harbour Road.
2. Further traffic management improvements within the Outer Ring Road, including extension of area licensing scheme.
3. Construction of East/West Mass Transit Corridor from Kebon Jeruk, via Tanah Abang, Gambir, Pasar Senen and Pulo Gadung to new interchange with railway between Klender Baru and Cakung.
4. Upgrading of Blok M-Sudirman-Thamrin-Kota Mass Transit Corridor, and extension from Blok M to Pasar Minggu.
5. Development of street system within the East/West Jakarta and within the Tangerang/ Bekasi Core-Cities.

BC-02 (2005)

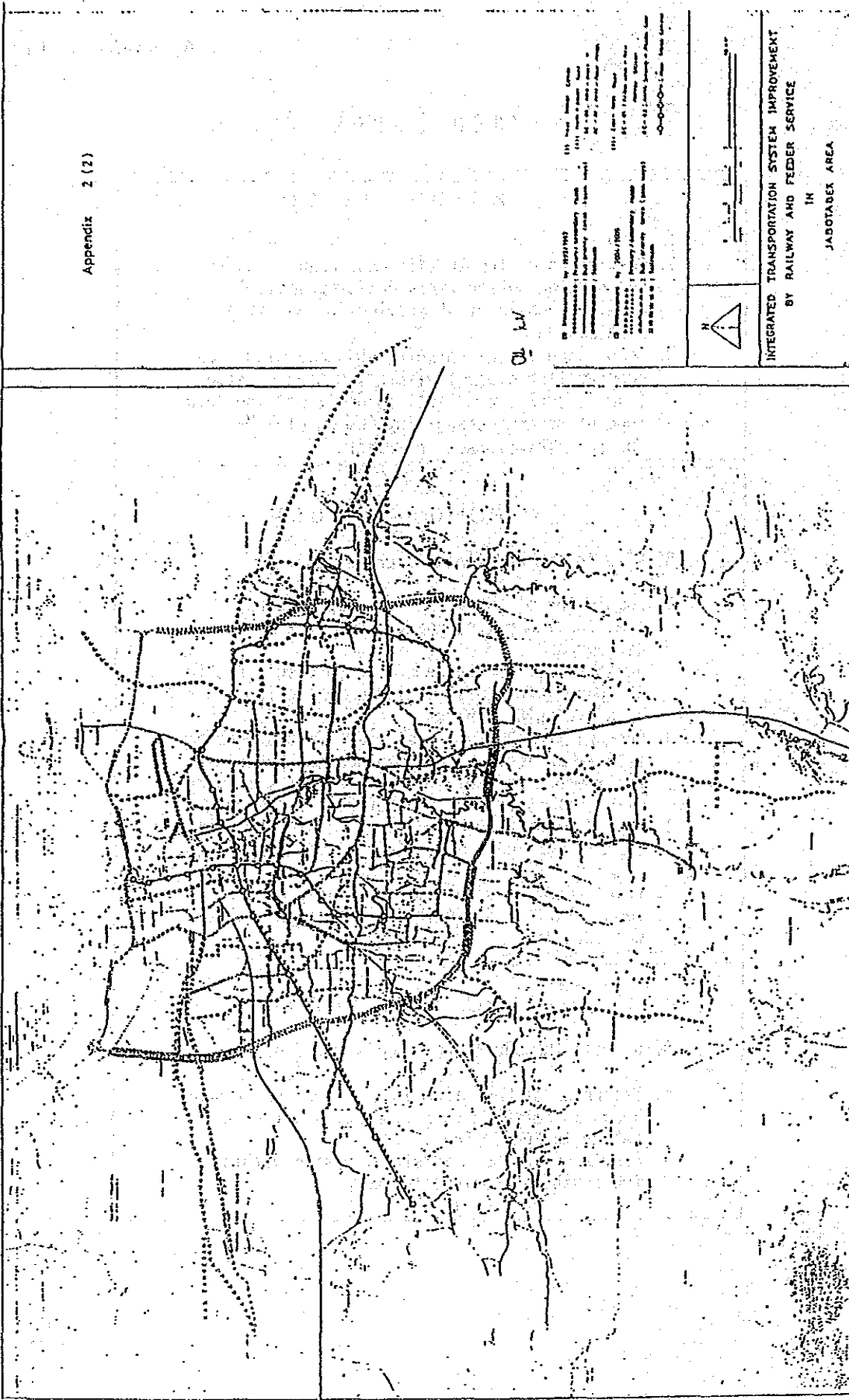
BC-01 with the additional improvements of

1. Extension of Mass Transit Corridor from Kebon Jeruk to North Serpong from new station near Cakung to Pondok Gede.
2. Provision of the road/street system within the southeast/southwest suburs.

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Appendix 2 (2)

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Legend:
- - - - - Secondary Railway
- - - - - Feeder Railway
- - - - - Proposed Feeder Railway
- - - - - Proposed Secondary Railway
- - - - - Proposed Main Railway
- - - - - Proposed Feeder Railway
- - - - - Proposed Secondary Railway
- - - - - Proposed Main Railway



INTEGRATED TRANSPORTATION SYSTEM IMPROVEMENT
BY RAILWAY AND FEEDER SERVICE
IN
JABOTABEK AREA

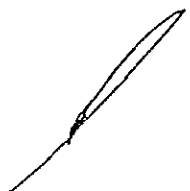
Appendix 1-3 Minutes of Meeting on the Interim Report I

JICA Study Team for the "Study on Integrated Transportation System Improvement by Railway and Feeder Service in Jabotabek Area (hereinafter referred to as "the Study") submitted and explained the Interim Report I to the DGLT, Ministry of Communication. DGLT, considering the major points included in the Report, accepted it in principle.

The followings have been agreed upon between DGLT and JICA Study Team.

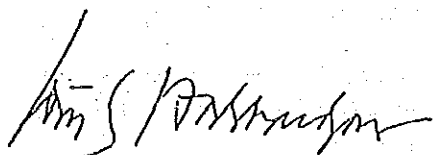
1. With respect to railway improvement level at 1992, "b" option as defined in the Report has been selected.
2. With respect to alternative patterns for Master Plan, combination of Ry2 and BCol, namely 052 case, has been selected as the optimal alternative pattern.
3. With respect to urgent projects for feasibility studies, the following three projects have been selected:
 - (a) Feeder service improvement
 - (b) Station facilities improvement
 - (c) Grade separation of Eastern Line
4. With respect to the feasibility study on construction of Mass Rapid Transit System along the major corridors, it will not be carried out in the Study. However, recognizing the importance of the study as mentioned in the Interim Report I, DGLT expressed the eagerness that it should be executed just following the completion of the Study. JICA Study Team promised to convey the desire of DGLT to the Government of Japan.
5. JICA Study Team, in carrying out the Study, would try to work in close contact with TNPR and should consider, as necessary, input from TNPR and Studies for Land and Public Transport Development in Jabotabek to be financed by the World Bank under the direction and coordination of the Steering Committee, in case the same is set up for the Study and TNPR.

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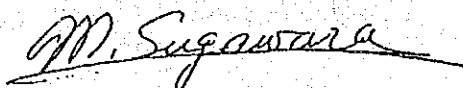


6. DGLT requested the JICA Study Team to submit the pertinent supporting data of the Study. JICA Study Team would try to submit such pertinent data as far as they are feasible and available within the limited time frame with respect to specific items requested by the Counterparts.

Jakarta, September 19, 1989



Ir. GIRI S. HADIHARDJONO, MSE
Director General of Land
Transport and Inland Waterway
Ministry of Communication



Dr. MISAO SUGAWARA
Leader of JICA Study
Team

Appendix 4-1 Scale of Station Plaza Calculated from the Number of Passengers

Number of Passengers	20,000/day \leq $N \leq$ 100,000/day	100,000/day \leq $N <$ 200,000/day	200,000/day \leq N
Scale	3,000 m ²	5,000 m ²	8,000 m ²
Central Line	(Tebet), (Cawang), (North minggu), <u>Lenteng Agung</u> , Depok, <u>Pondokterong</u> , Citayam*, New Station (2)*, Bojonggede*, Cilebut*, (Bogor) 7 stations	Duren Kalibata, Tanjung Barat #Kebon Pedes, 1 station	Jakarta Kota, Gambir, Manggarai, Depok Baru 2 stations
Tangerang Line	Grogol Pesing, New Station(2)*, Bojongindah*, Rawabuya, Kalideres*, Poris*, Batucapeer*, Tangerang 10 stations		
Serpong Line	Palmerah*, New Station(2)*, Kebayoran, Pondok Bitung*, Bintaro, Jurangmangu*, Sudimara*, Rewabuntu Serpong* 10 stations		
Western Line	New Station(2)*, Angke, Duri, (Mampang)	Tanah Abang 1 station	(Dukuh), Jatinegara 1 station
Eastern Line	Rajawari, Gang Sentiong, Kramat, Pondok Jati 4 stations	New <u>Kampungbandan</u> , Kemayoran, (Tanjung Priok) 1 station	Pasar Senen 1 station
Bekasi Line	New Station 1 station	<u>Klender</u> , <u>Klender Baru</u> , Cakung <u>Kranji</u> , Bekasi 2 stations	
Remarks	(1) Underlined stations are "On going project." (2) Parenthesized stations have no space available for expansion. (3) Asterisk stations have not much passengers, but installation of the station plaza should be considered in view of the present condition and the development project contemplated in the vicinity.	Total 5 stations (1) Tanjung Priok has a matured urban area and so has no space for expansion. (2) #Kebon Pedes has the station plaza installed by the city side.	Total 4 stations (1) Jakarta Kota is according to the redevelopment project. (2) Dukuh is bridged and has no space for expansion.

Appendix 4-2 Improvement of Feeder Services

Stations	Improvement of Feeder Services											Transfer Time (minutes)					
	Improvement of Station Plaza			Improvement of Road Facilities								1988		1992		2005	
	Large	Medium	Small	Bus Bay	Signal	Pedestrian Bridge	Road Width Extension	Steps, etc.	Pedestrian deck	1988	a	b	Ry-1	Ry-2	Ry-3		
Jakarta Kota	Ry-2(21)											10	10	10	8	3	
Jayakarta (New Station)				Ry-1(19)					Ry-1(19)								
Manggabesar (New Station)				Ry-1(19)					Ry-1(19)								
Sawah Besar				Ry-1(19)					Ry-1(19)			9	8	8	6	6	
Juanda (New Station)				Ry-1(19)					Ry-1(19)								
Gambir	a (1)			a (1)								12	3	3	3	3	
Gondangdia (New Station)				a (1)													
Cikini				Ry-1(19)	Ry-1(19)							9	8	8	6	6	
Manggarai	b (12)											7	7	3	3	3	
Tebet				Ry-1(19)	Ry-1(19)							6	5	5	3	3	
Cawang (New Station)									Ry-1(19)								
Duren Kalibata												12	7	7	5	5	
North Minggu (New Station)				Ry-1(19)	Ry-1(19)												
Pasar Minggu				Ry-1(19)	Ry-1(19)							8	7	7	5	3	
Tanjung Barat (Revived)																	
Lenteng Agung				a (6)	Ry-1(19)							9	8	8	6	6	

Remarks

1. Kota-Cikini and Tebet-Depok have the transfer time reduced with completion of the "on going" railway improvement project (a).
2. Manggarai Station has the transfer time reduced with completion of the railway improvement project (b) up to 1992.
3. The values of the transfer time shown are those used for estimation of the demand.
4. The shadowed is applicable only to the level of improvement concerned.

Stations	Improvement of Feeder Services										Transfer Time (minutes)							
	Improvement of Station Plaza					Improvement of Road Facilities					1988		1992				2005	
	Large	Medium	Small	Bus Bay	Signal	Pedestrian Bridge	Road Width Extension	Steps, etc.	Pedestrian deck	1988	a	b	Ry-1	Ry-2	Ry-3			
Uni.Pancasila				Ry-1(19)	Ry-1(19)					10	9	9	7	7	7			
Uni.Indonesia																		
Pondok Cina																		
Depokbaru	Ry-1(19)				Ry-1(19)													
Depok					Ry-1(19)					8	5	5	3	3	3			
Pondokterong (Revived)					Ry-1(19)													
Citayam					Ry-1(19)													
New Station					Ry-1(19)													
Bojonggedeh					Ry-1(19)													
New Station					Ry-1(19)													
Cilebut					Ry-1(19)													
Kebon Pedes (Revived)		Ry-1(19)											3	3	3			
Bogor																		

Central Line

Remarks

1. Station plaza of Kebon Pedes will be improved by the fund of the city side.
2. Depokbaru will have a bus terminal provided.
3. The values of the transfer time shown are those used for estimation of the demand.

Stations	Improvement of Feeder Services										Transfer Time (minutes)					
	Improvement of Station Plaza			Improvement of Road Facilities							1988		1992		2005	
	Large	Medium	Small	Bus Bay	Signal	Pedestrian Bridge	Road Width Extension	Steps, etc.	Pedestrian deck	a	b	Ry-1	Ry-2	Ry-3		
Tangerang Line																
Grogol			Ry-2(27)	Ry-1(19)		Ry-1(19)				10	10	7	6	6		
Pesing			Ry-2(27)	Ry-1(19)	Ry-1(19)		Ry-1(19)			9	9	7	6	6		
New Station			Ry-2(27)				Ry-1(19)									
Bojongindah			Ry-2(27)				Ry-1(19)									
Rawabuaya			Ry-2(27)							4	4	4	3	3		
Kalideres			Ry-2(27)							4	4	4	3	3		
Paris			Ry-2(27)							5	5	5	4	4		
Batuceper			Ry-2(27)													
New Station			Ry-2(27)													
Tangerang			Ry-2(27)		Ry-1(19)		Ry-1(19)			9	9	7	3	3		

Remarks

1. The new stations will be installed under the "Automatic signalling on Tangerang Line" (b option), but the improvement of the station plaza will be considered along with that of the station building under Ry2.
2. Small scale station plazas will be considered according to the detailed design of France.
3. The values of the transfer time shown are those used for estimation of demand.

Stations	Improvement of Feeder Services										Transfer Time (minutes)				
	Improvement of Station Plaza			Improvement of Road Facilities							1988		2005		
	Large	Medium	Small	Bus Bay	Signal	Pedestrian Bridge	Road Width Extension	Steps, etc.	Pedestrian deck	a	b	Ry-1	Ry-2	Ry-3	
Palmerah			Ry-2(27)	RY(19)	RY(19)					10	10	8	3	3	
New Station			Ry-2(27)												
Kebayoran			Ry-2(27)	RY(19)	RY(19)		RY(19)			10	10	8	3	3	
Pondok Bitung			Ry-2(27)	RY(19)	RY(19)		RY(19)			10	10	8	3	3	
Bintaro (Signal Station)			Ry-2(27)							5	5	5	3	3	
Jurangmangu			Ry-2(27)				RY(19)								
Sudimara			Ry-2(27)				RY(19)			5	5	4	3	3	
New Station (Signal Station)			Ry-2(27)												
Rawabuntu			Ry-2(27)				RY(19)								
Serpong			Ry-2(27)				RY(19)			8	8	5	3	3	

Serpong Line

Remarks

1. The new stations will be installed under the "Electrification and Automatic Signalling on Serpong Line" (a option), but the improvement of the station plaza will be considered along with that of the station building under Ry2.
2. Small scale station plazas will be considered according to the detailed design of France
3. The values of the transfer time shown are those used for estimation of the demand.
4. The shadowed is applicable only to the level of improvement concerned.

Stations	Improvement of Feeder Services										Transfer Time (minutes)					
	Improvement of Station Plaza					Improvement of Road Facilities					1988		1992		2005	
	Large	Medium	Small	Bus Bay	Signal	Pedestrian Bridge	Road Width Extension	Steps, etc.	Pedestrian deck			a	b	Ry-1	Ry-2	Ry-3
Western Line	Jakarta Kota				Ry-1(19)						10	10	10	8	3	3
	New Station			Ry-2(27)												
	Angke			Ry-2(27)												
	Duri			Ry-2(27)	Ry-1(19)						11	11	11	9	3	3
	New Station			Ry-2(27)												
	Tanah Abang		Ry-2(27)		Ry-1(19)					Ry-2(27)	8	8	8	6	3	3
	Karet				Ry-1(19)											
	Dukuh									Ry-1(19)	6	6	6	6	3	3
	Mampang															
	Manggarai	b (12)									7	7	7	3	3	3
Bekasi Line	Jatinegara	Ry-2(27)			Ry-1(19)						9	9	9	6	3	3
	Klender		a (5)		Ry-1(19)					Ry-2(27)	10	9	9	6	3	3
	Klenderbaru		a (5)		Ry-1(19)						10	9	9	3	3	3
	New Station															
Station upon Petition	Cakung		Ry-1(19)								5	4	4	3	3	3
	Kranji		a (5)		Ry-1(19)											
	Bekasi		Ry-1(19)								9	8	8	3	3	3
	Remarks															

1. Klender-Bekasi has the transfer time reduced with completion of the "on going" project (a).
2. The values of the connection time shown are those used for estimation of the demand.
3. The shadowed is applicable only to the level of improvement concerned.

Stations	Improvement of Feeder Services										Transfer Time (minutes)					
	Improvement of Station Plaza					Improvement of Road Facilities					1988		1992		2005	
	Large	Medium	Small	Bus Bay	Signal	Pedestrian Bridge	Road Width Extension	Steps, etc.	Pedestrian deck	a	b	Ry-1	Ry-2	Ry-3		
Jakarta Kota	Ry-2(21)				Ry-1(19)					10	10	8	3	3		
New Kampungbandan		a (8)														
Rajawali			Ry-2(27)	Ry-1(19)	Ry-1(19)					11	11	9	8	8		
Kemayoran		Ry-2(27)		Ry-1(19)	Ry-1(19)					10	10	8	3	3		
Pasar Senen	Ry-2(27)			Ry-1(19)	Ry-1(19)					10	10	8	3	3		
Gang Sentiong			Ry-2(27)													
Kramat			Ry-2(27)													
Pondok Jati			Ry-2(27)													
Tanjung Priok										8	8	3	3	3		
Ancol				Ry-2(27)												

Remarks

1. The values of the transfer time shown are those used for estimation of the demand.
2. The shadowed is applicable only to the level of improvement concerned.

Appendix 8-1 Cost Sharing of the Railway Facilities Related to Urban
Facilities (In the Case of Japan)

Where the railway facilities and the urban facilities such as road are planned through mutual agreement, it is reasonable that the railway and city sides bear respectively the cost according to the benefits. In Japan, rules are determined for sharing the costs of grade separation of railway and road, establishment of a station plaza, provision of a through passage in an over-track station, etc., as shown in the following table.

	Benefits on Railway Side	Cost Sharing			Remarks
		Former National Railway	Japan Railway	Private Railway	
Continuous track elevation	<ul style="list-style-type: none"> . Benefit from lease of the space under the elevated track . Benefit from elimination of railway crossing accidents . Benefit from resolution of railway crossing accidents 	10%	Under consideration	7%	
Flyover	<ul style="list-style-type: none"> . Benefit from elimination of railway crossings . Benefit from resolution of railway crossing accidents 	1/3	Cost equivalent to benefits under regulation	Cost equivalent to benefits in principle	
Station plaza		1/4	1/6	According to negotiation	
Over-track station		Cost of station facilities			All but cost relative to free passage to be borne by city side

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