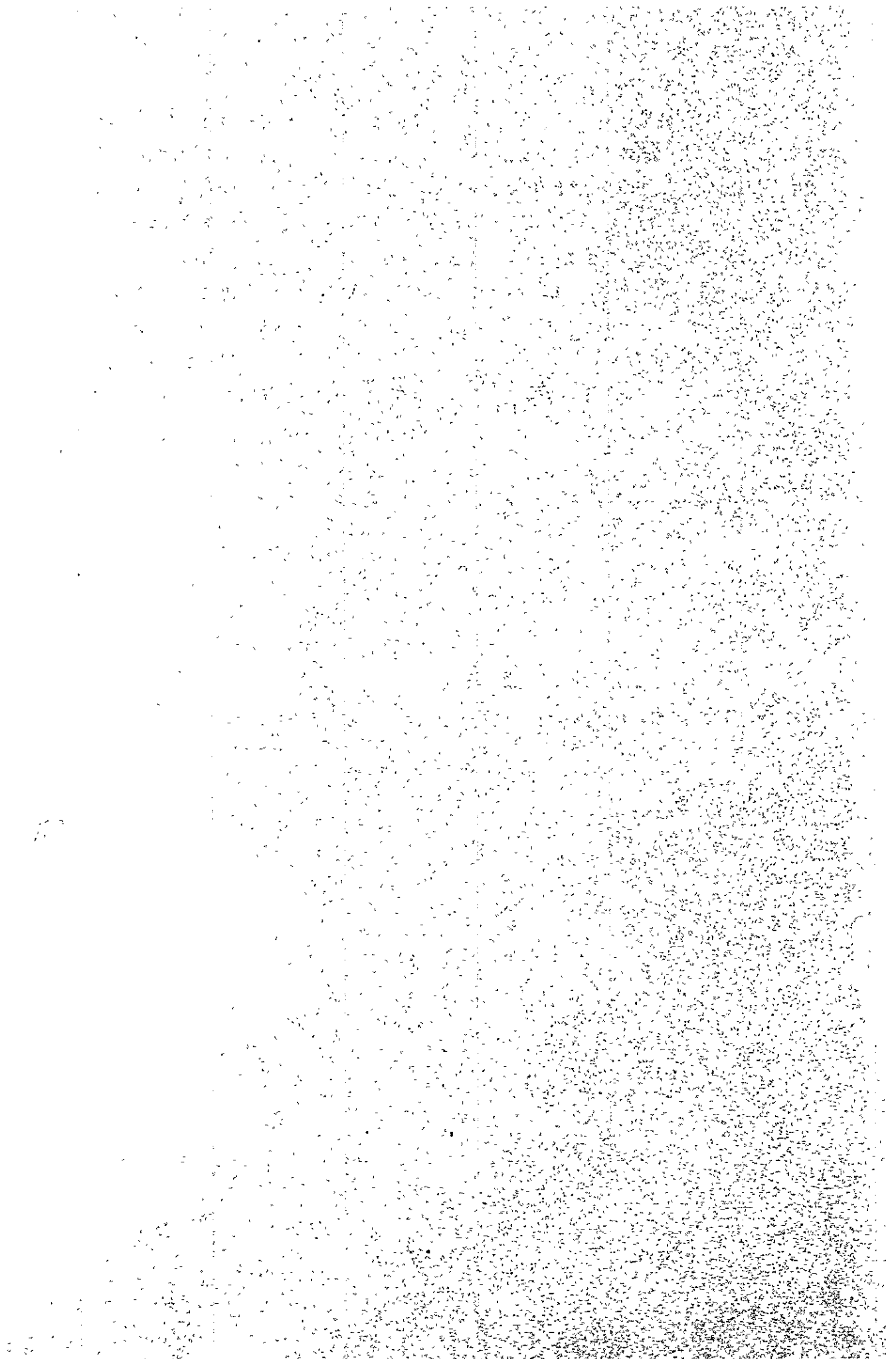


# 資料編



## Appendix 1 参考資料

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- (8) Statistic Wilayah DKI Jakarta 1982

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- (1) Report on Urban/Suburban Railway Transportation in JABOTABEK area, 1980
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DAN PERLINDUNGAN TENAGA KERJA DKI  
JAKARTA

## Appendix 2 鉄道旅客交通実態調査

### (1) 調査の目的

本調査の交通調査の目的は、交通実態と一致するデータ収集と交通需要予測手法を確立するためのものである。

調査は、JABOTABEK地域の鉄道駅でのインタビュー調査と交通量観測調査からなっている。インタビュー調査は、鉄道旅客の起終点、トリップ目的、鉄道駅へのアクセス時間およびアクセス手段等の情報を収集するために計画した。

交通量観測調査は、インタビュー調査で収集したサンプルデータを適用するにあたって拡大率を与えるために実施した。

収集したサンプルを基に、Tangerang 線、Merak 線、Bogor線 および Bekasi 線の鉄道旅客のトリップ分布を将来交通需要予測のための主因を与えるために解析した。

### (2) 調査地点と調査スケジュール

予備地点調査が実施され JABOTABEK 地域の数駅が使用されていないことがわかった。駅長または駅員へのインタビューも同時に調査地域におけるインタビュー調査範囲を定義するため行った。調査鉄道駅は、Jakarta 都心部への旅行時間が約 1 時間という鉄道駅および Jakarta 地域への通勤・通学者が相対的に高い割合となっている鉄道駅を含めるように選出した。結果として、交通調査は以下に示す鉄道駅、時間帯で実施した。

#### 1) Tangerang 線 (1983年 9月19日 (月) 05.00—19.00)

- |                |              |
|----------------|--------------|
| 1. Grogol      | 5. Kalideres |
| 2. Pesing      | 6. Poris     |
| 3. Bojongindah | 7. Batuceper |
| 4. Rawabuaya   | 8. Tangerang |

#### 2) Merak 線 (1983年 9月20日 (火) 05.00—19.00)

- |              |                   |
|--------------|-------------------|
| 1. Sudimara  | 4. Cisauk         |
| 2. Rawabuntu | 5. Parung Panjang |
| 3. Serpong   |                   |

3) Bekasi線 (1983年9月21日 (水) 05.00—20.00)

- |                 |                |
|-----------------|----------------|
| 1. Klender      | 6. Tambun      |
| 2. Klender Baru | 7. Cikarang    |
| 3. Cakung       | 8. Lemahabang  |
| 4. Kranji       | 9. Kedunggedeh |
| 5. Bekasi       | 10. Karawang   |

4) Bogor線 (1983年9月22日 (木) 04.30—21.00)

- |                   |                |
|-------------------|----------------|
| 1. Tebet          | 7. Depok       |
| 2. Duren kalibata | 8. Citayam     |
| 3. Pasar Minggu   | 9. Bojonggedeh |
| 4. Lenteng Agun   | 10. Cilebut    |
| 5. Pondok Cina    | 11. Bogor      |
| 6. Depok Baru     |                |

(3) 調査方法

(a) 交通量観測調査

Jakarta 方面への鉄道旅客に限定して各調査鉄道駅でカウントした。

プラットフォーム上の人数を列車発着前後にそれぞれカウントし、列車発着前後のプラットフォーム上の人数の差を鉄道乗車人員として記録した。

(b) インタビュー調査

インタビューもまた Jakarta 方面のプラットフォームで列車待ちしている人を対象に行った。目標サンプル率が、1列車当りの乗車人員が100人以上の鉄道駅で20%、1列車当りの乗車人員が100人未満の鉄道駅で50%となるように計画した。

交通調査用の調査シートは、図A.1, A.2に示す。

インタビュー調査で記入すべき質問事項等は、つぎのとおりです。

- |                    |                |
|--------------------|----------------|
| 1) 調査時間            | 2) トリップ目的      |
| 3) トリップ出発地         | 4) 鉄道駅へのアクセス手段 |
| 5) アクセス時間          | 6) 着地          |
| 7) トリップ到着地へのイグレス手段 | 8) イグレス時間      |
| 9) トリップ到着地         |                |

交通調査と併わせて、Jakarta 方面列車の乗車の乗車券発行数と乗車定期券についての質問票を各調査鉄道駅に配布した。

それ故、1980年～1983年における Jakarta 方面についての週日調査のための曜日別および月別鉄道旅客交通データが各調査鉄道駅から収集された。

#### (4) 交通解析用のゾーン区分

調査地域は以下の条件を考慮しトラフィックゾーンに分割した。

- 1) Kalurahan 地区の行政単位は、各データ利用、収集情報を参考する上で DKI Jakarta のゾーンを基本として採用する。
- 2) Desa 地区の大行政単位である Kecamatan 地区は、BOTABEK 地域の基本ゾーンの基本として採用した。
- 3) 「The Feasibility Study on Jakarta Harbour Road Project」のゾーニングは、その1980年のパーソントリップ OD 表の利用を考慮するにあたってに取り入れた。
- 4) ゾーン区分は、将来のゾーン別指標の推計も考慮し「JABOTABEK Metropolitan Development Plan」を適用した。

各鉄道駅に対してトラフィックゾーンを想定することは、駅間の交通量を推定するため望しい。しかしながら、統計データおよび将来計画値を正確にするためにはゾーンを更に小さくする必要がある。

それ故、鉄道の走っている各ゾーンに位置している1つの代表鉄道駅を想定した。

したがって、調査地域を以下のとおりに分割した。

DKI Jakarta	:	30ゾーン	No.1～30
BOTABEK	:	23ゾーン	No.31～53
<u>JABOTABEK 域外</u>	:	<u>3ゾーン</u>	<u>No.54～56</u>
計	:	56ゾーン	

DKI Jakarta および Jakarta 市以外のゾーニング図は、図A.3、図A.4にそれぞれ示す。

Hari/Tanggal : .....

Stasiun K.A. : .....

Nama Surveyor : .....

Nama Supervisor : .....

**SURVEY PENUMPANG**

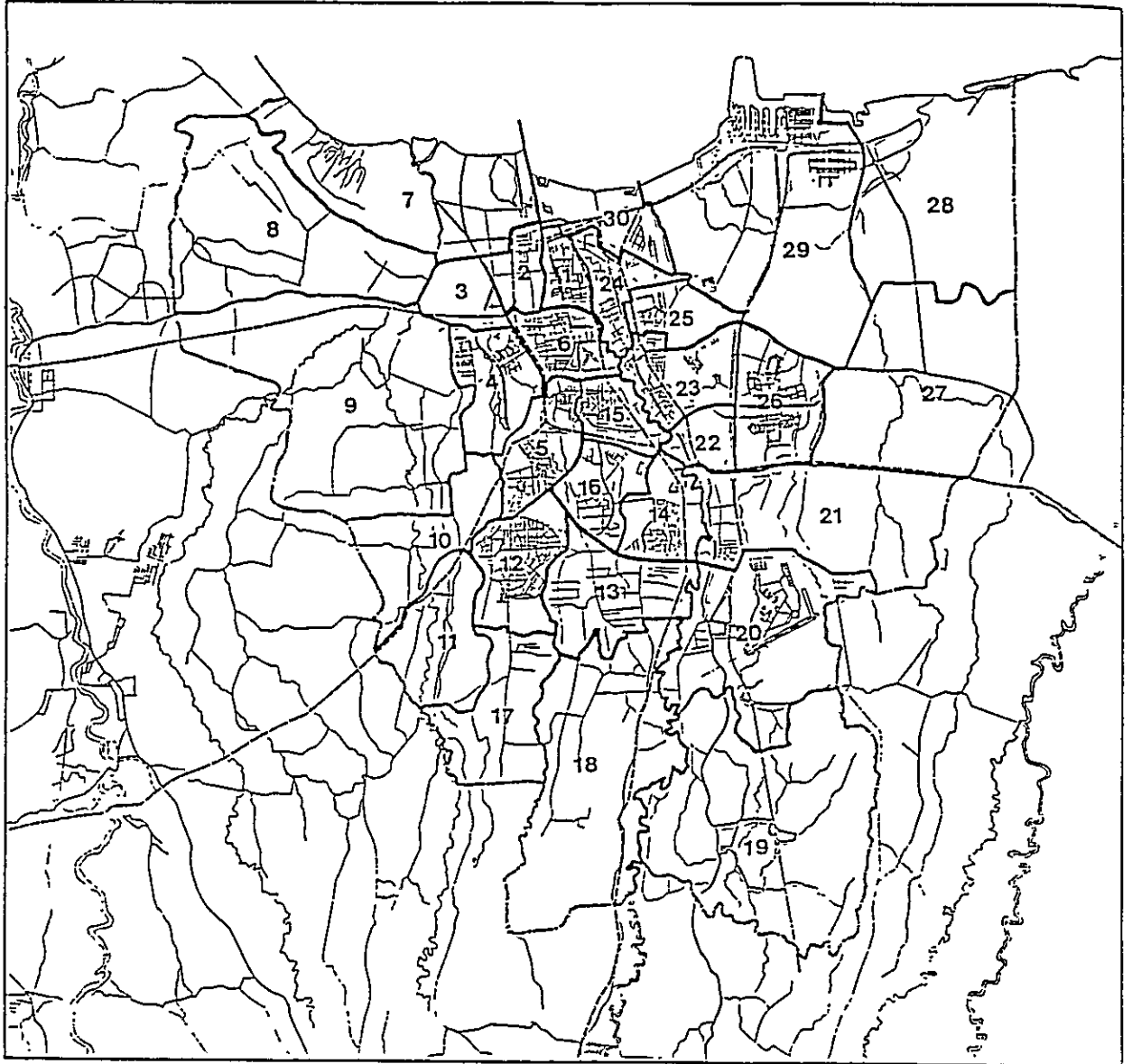
NO: SAM- PEL	NO: KERETA	WAKTU KERETA BERANGKAT	SURVEYOR A		SURVEYOR B		SURVEYOR C		SURVEYOR D		JUMLAH
			SEBE- LUM	SESU- DAH	SEBE- LUM	SESU- DAH	SEBE- LUM	SESU- DAH	SEBE- LUM	SESU- DAH	
			SISA		SISA		SISA		SISA		
1.		jam menit									
2.		jam menit									
3.		jam menit									
4.		jam menit									
5.		jam menit									
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17.		jam menit									
18.		jam menit									
19.		jam menit									
20.		jam menit									

図A.1 鉄道旅客観測調査シート



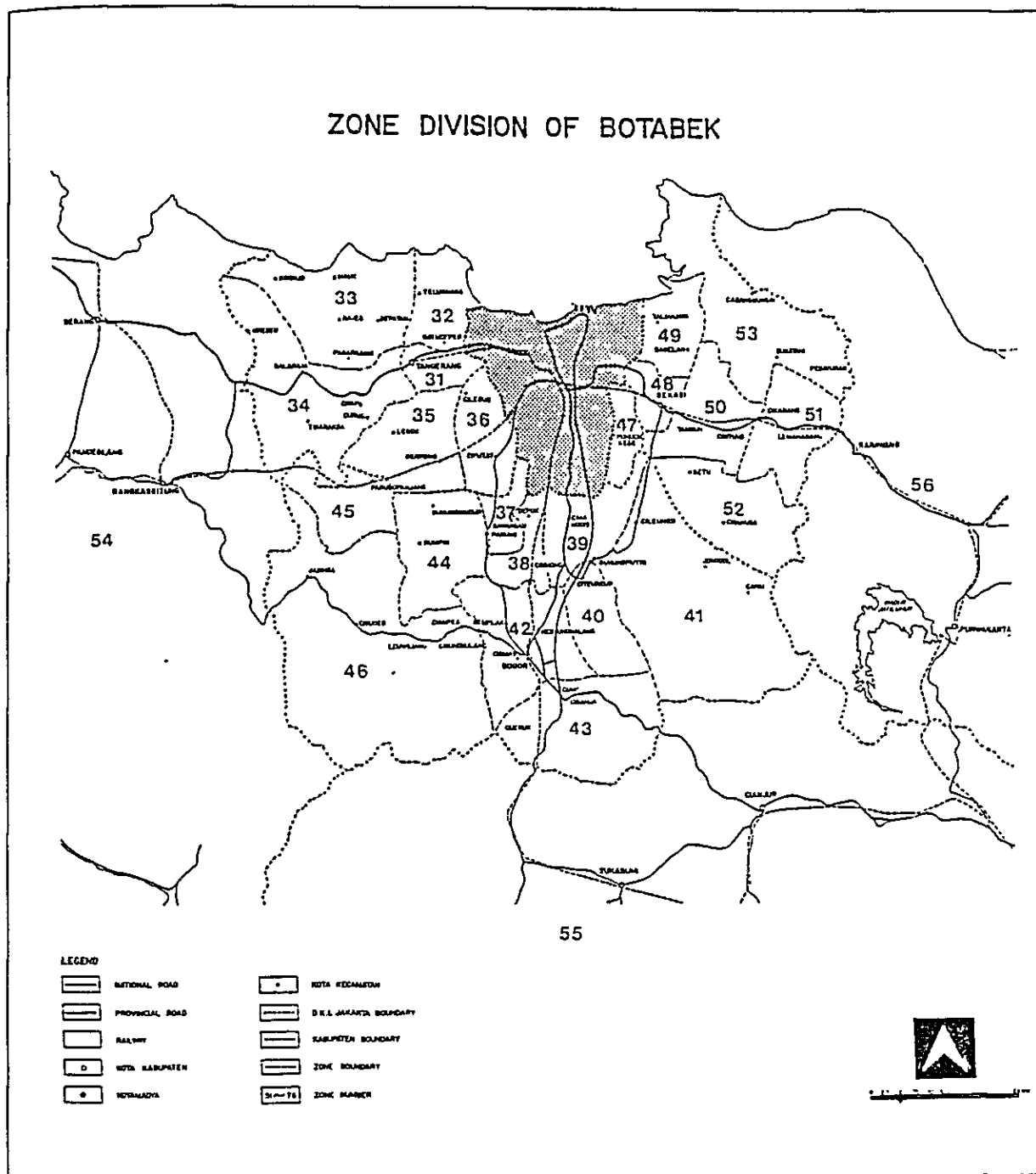
PILIH NOMOR JAWABAN DIBAWAH :		PILIR NOMOR JAWABAN DIBAWAH :		PILIR NOMOR JAWABAN DIBAWAH :		PILIR NOMOR JAWABAN DIBAWAH :		PILIR NOMOR JAWABAN DIBAWAH :	
1. DARI RUMAH KE TEMPAT KERJA 2. DARI RUMAH KE SEKOLAH 3. MERUPAKAN BAGIAN DARI PEKERJAAN		4. BERDAGANG 5. KEMBALI KE RUMAH 6. LAIN - LAIN		1. JALAN RAKI 2. SEPEDA 3. SEPEDA MOTOR		4. BECAK 5. COKY/MIKRO-BUS/ MICROLET/MI-JET 6. B I S		7.. SEDANG/JREP 8. T R U K 9. LAIN-LAIN	
JAM SURVEY	APAKAH MAKSUD PERJALANAN	BERANGKAT DARI NAMA JALAN, DESA/KELURAHAN KECAMATAN, KOD./KAB.	MAJE APA KE STARTUN K.A.A.	WAKTU TEHPUR (HEBIT)	TUJUAN SETIASUN BERIKUTNYA	MAJE APA KE TUJUAN DARI ST.KA.	WAKTU TEHPUR (HEBIT)	ALAHAT TUJUKER NAMA JALAN, DESA/KELURAHAN, KECAMATAN, KOD./KAB.	WAKTU TEHPUR (HEBIT)
3- 10- 13- 18-									
6- 11- 16- 19-									
7- 12- 17- 20-									
8- 13-									
9- 14-									
3- 10- 13- 18-									
6- 11- 16- 19-									
7- 12- 17- 20-									
8- 13-									
9- 14-									
3- 10- 13- 18-									
6- 11- 16- 19-									
7- 12- 17- 20-									
8- 13-									
9- 14-									
3- 10- 13- 18-									
6- 11- 16- 19-									
7- 12- 17- 20-									
8- 13-									
9- 14-									

図A. 2 鉄道旅客インタビュー調査シート



図A.3 DKI Jakartaのゾーン区分

# ZONE DIVISION OF BOTABEK



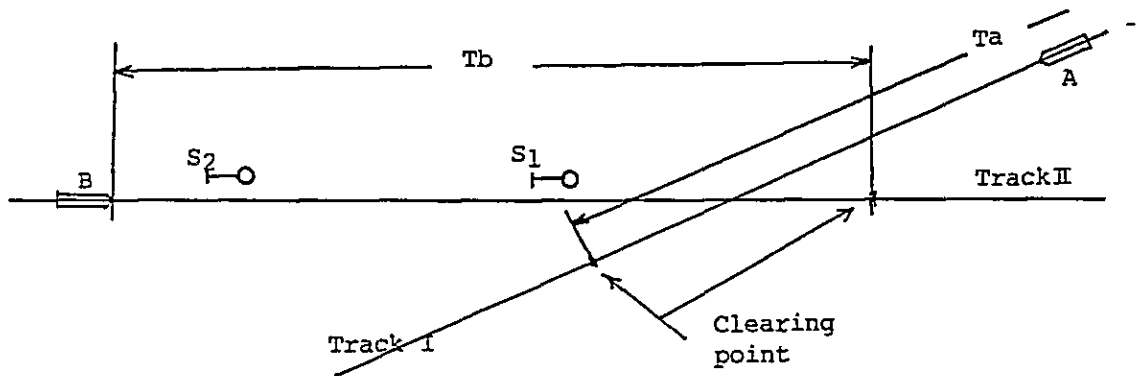
図A.4 Jakarta 市外のゾーン区分

### Appendix 3 平面支障の算定

#### 支障の計算

報告書に述べてある様に交差箇所における列車運行の支障の度合を計る為に、一般に支障率が用いられる。

支障率は与えられた時間内に於ける支障時間と与えられた時間の商の百分率として計算する。



図A.5 平面交差

#### 列車Bの場合

$T_b$  の計算に当り下記の様に仮定する。即ち

S1 ……停止現示（赤）

S2 ……注意現示（黄）

S1は列車がS2を通過後進行信号（緑）に変わる。

列車BはS2を通過する時は45km/H以下でS1の手前で停止出来る様に減速せねばならない。従って支障時間（ $T_b$ ）計算に当っては減速による制動開始時点が支障時間開始点となる。Manggarai 駅の場合はS1とホームとの間に多くの分岐器（ダブル スリップ スイッチ）がある為、S1通過後は25km/Hで運転せねばならない。

列車の最後部が解錠点を通過する時点が支障時間（ $T_b$ ）の終点である。然し列車が解錠点を通過した後には信号及びポイントを復位せねばならないがこれに要する時間は手動鎖錠の場合は約30秒、電気連動装置の場合は約10秒である。従って合計支障時分は  $T_b+30$  或は  $T_b+10$  秒となる。

第2図に支障時分を図示した。即ち Manggarai 到着列車は183秒、出発列車は125秒、通過列車は274秒がそれぞれ支障時分となる。Manggarai 駅の場合、分岐器群が北側と南側とに分けられて居るので北側と南側とに分けて支障時分を計算するが、通過列車の場合は支障時分を2分として計算する。

支障率は $\Sigma \{ (Ta+30) + (Tb+30) \} / \text{与えられた時間} \times 100\%$ で計算する。

(Manggarai 駅は手動鎖錠である。)

一般に支障率は次のように考えられる。

40%以下……普通

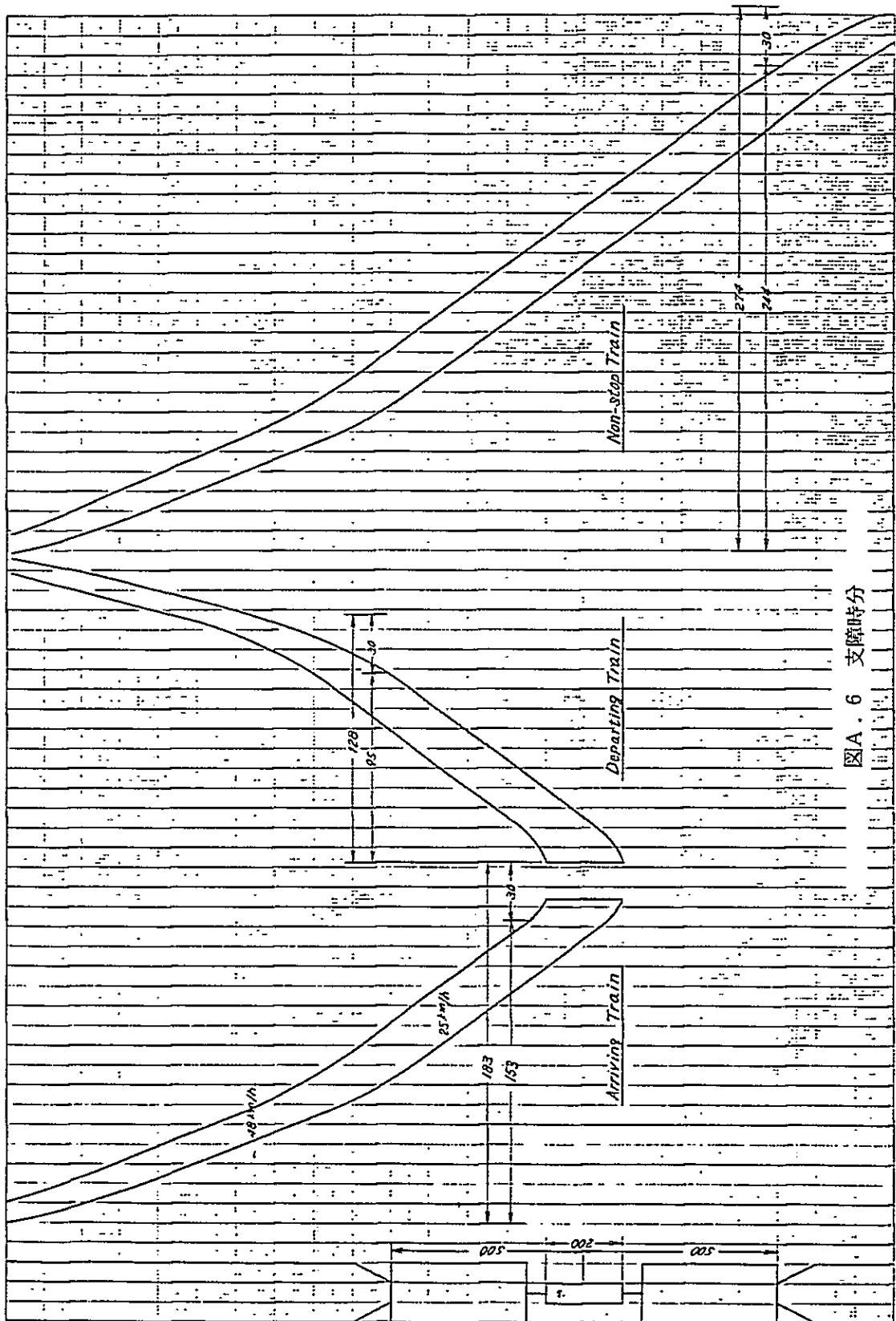
40～60%……運転条件により列車計画が困難

60%以上……列車計画不可能。従って支障率が60%以下となる様に何等かの手段を講ずる必要がある。

支障率の評価に当って下記の点に留意せねばならない。

第1図に於いて極端な場合、路線Ⅰの列車本数は唯1本であるが路線Ⅱの列車は15本で支障率は50%である場合、この場合は列車計画上何等問題はない。然し路線Ⅰに8本の列車が、路線Ⅱに48本の列車があつて支障率が50%の場合、列車計画が困難となろう。

従って支障率の評価に当っては支障列車の本数をチェックする必要がある。



圖A. 6 支障時分

## Appendix 4 故障時における車両性能

### (1) 電車の起動特性

長時間の低速運転は、主抵抗器焼損の原因となるため、車両故障時を含め、加速度は、0.5km/h/sを下回るべきではない。正常時の編成は2M2T又は4M4Tであるが、電動車が故障すると次のケースが想定される。

ケース (1)	× TMMT	1M3T
ケース (2)	×× TMMT+TMMT	2M6T
ケース (3)	× TMMT+TMMT	3M5T (×印は故障電動車)

このようなケースにおいては、残りの電動車で25%の勾配を通過するため、より大きな、起動電流を要することになる。平常時には列車の速度ステップの進段を司どる限流値を空車時365A、満車時に440Aに設定している。しかしながら故障時においても0.5km/h/s以上の加速度を得るため、高加速スイッチ扱により、限流値は空車時で508Aに、満車時で580Aに増加できる。表A.1は、異常時における1M3T編成の25%勾配起動時の加速度を示す。表から高加速スイッチ扱いにより、空車条件で0.58km/h/sの加速度を得ることができるが、満車時には0.4km/h/sの加速度しか得ることが出来ない。従って異常時においては、25%上り勾配で0.5km/h/sを得るためには列車から乗客を降して運転しなくてはならない。

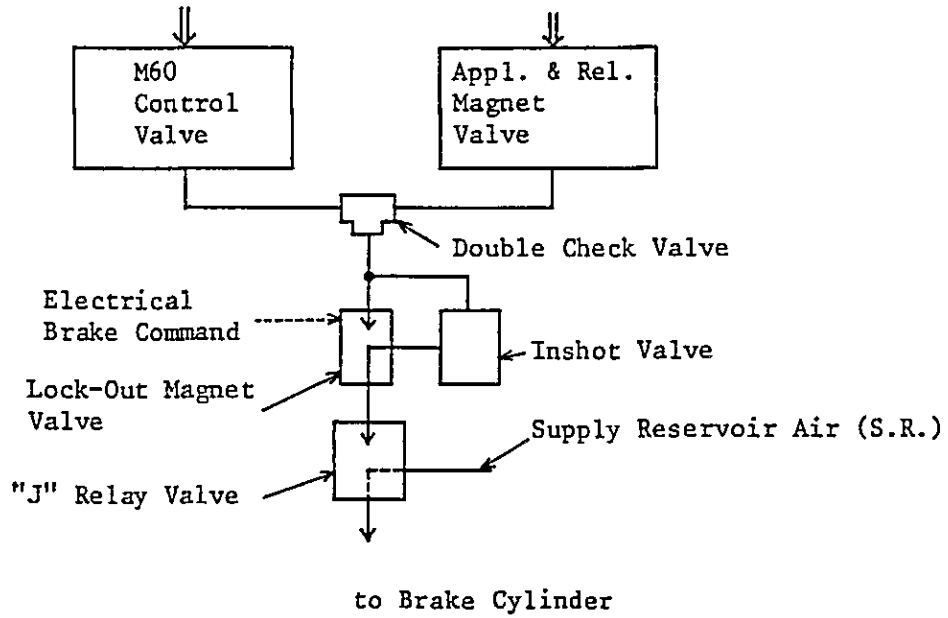
表A.1 25%勾配での列車加速度

Train formation	Condition	Limiting Current	Acceleration (km/h/s)
1M3T	Empty car	Normal set; 365A	- 0.05
		H.A.S: 505A	+ 0.58
	Full Load	Normal set; 440A	- 0.07
		H.A.S: 580A	+ 0.40

### (2) ブレーキ機能の安全システム

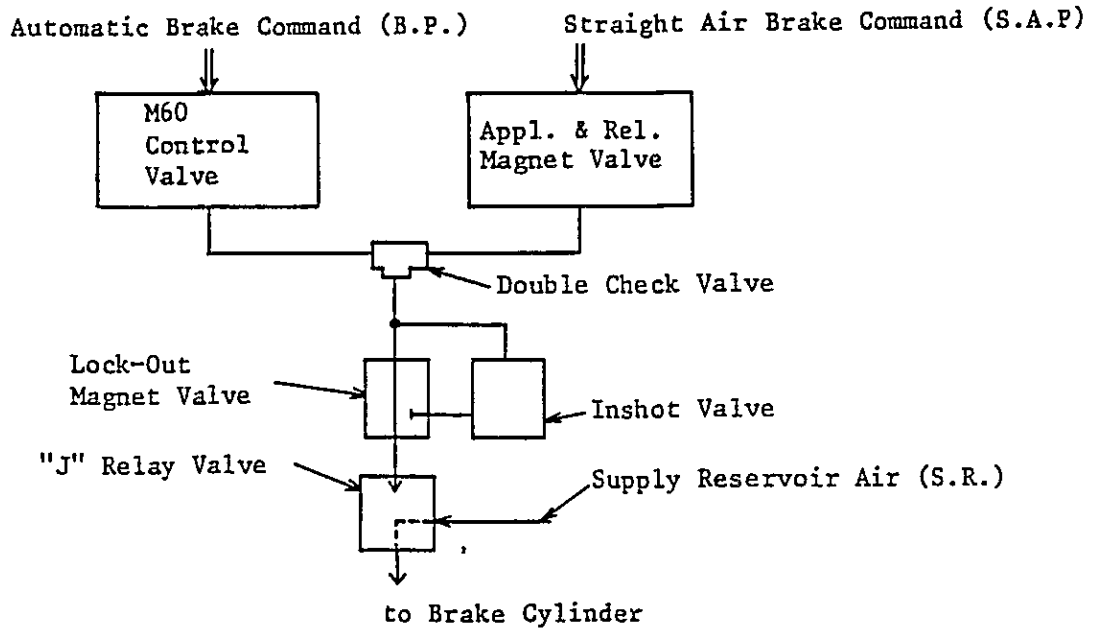
PJKAで使用している電車のSEDブレーキ方式は、発電ブレーキ付電磁直通ブレーキと、自動空気ブレーキの2つの機能を有している。本文で述べたブレーキ性能の確保については、自動空気ブレーキか、電磁直通ブレーキのいずれにおいても得ることが出来る。発電ブレーキが効いている間は、直通管圧力は、複式逆止弁を通して抑圧弁に供給され、抑圧された圧力は、締切電磁弁を通して“J”中継弁に供給され抑圧量に応じた圧力が供給空気留からブレーキシリンダーに送り込まれる。

Automatic Brake Command (B.P.)      Straight Air Brake Command (S.A.P.)



図A. 7 発電ブレーキ併用時のブレーキ作用

もし発電ブレーキが不能となると、縮切電磁弁が消磁されるため、直通管圧力は、抑圧弁で抑圧されず、"J" 中継弁に直接供給され、供給空気留からブレーキシリンダーに送り込まれる。



図A. 8 発電ブレーキが効かない場合のブレーキ作用



もし、運転中にブレーキ管が切断すると、ブレーキ管圧力は、急低下し自動非常ブレーキ装置が働き、列車を事故から守ることができる。

## Appendix 5 軸重

(1)

インドネシア国鉄の設計荷重は1921年に制定されたR・M荷重により軸重20tonとなっている。これは蒸気機関車の時代の荷重であり、蒸気機関車はDL、ELに比較して重量が大きく、その上動輪にはカウンターウェイトがあるので20tonは必要であった。

軸重は橋梁や軌道の設計に影響をする。軸重を2ton減らすと橋梁の建設費は3～5%位減らすことができる。重い軸重の機関車は軌道を破壊することは、はっきりしている。特に曲線や分岐器などへの影響は大きい。

このような理由で軸重を軽くすることは、軌道の保守や橋梁の建設費節減のため望ましいことである。したがって世界の各鉄道は軸重を減らす努力をしている。

一方、近代の技術発展により、より軽い軸重で同じけん引力が得られるようになってきた。特に電気機器の分野での改良がめざましい。

世界の鉄道の軸重の現状を図A.9に示す。

K・S荷重算定は、軸重、軸の配置、機関車の長さによって決まってくる。この表で使う18.9tonの軸重は18.0tonに5%の余裕を加えて18.9tonで検討した。

$$\frac{\text{全重量}}{\text{機関車の長さ}} = \frac{18.9\text{ton} \times 6 \text{軸}}{17.7\text{m}} = 6.4\text{ton/m}$$

JNR で現在使用されている機関車の最大軸重は、18.9tonであり、軸重18.9tonの機関車は、K S 16に相当する。これは、図A.10に示す。

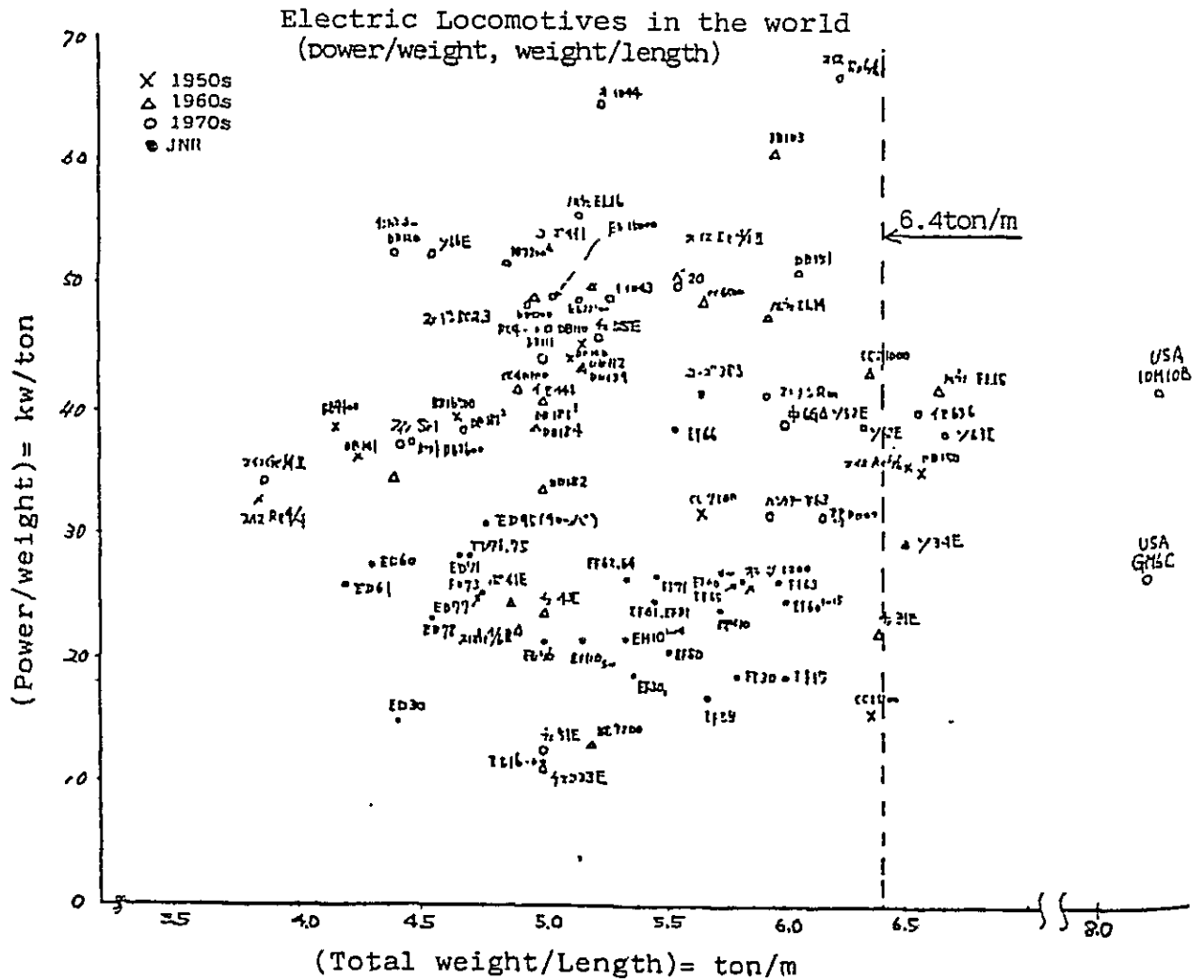
また現在 JNR で使用されている機関車の例を表A.2に示す。

表A.2 JNR に於ける機関車の例

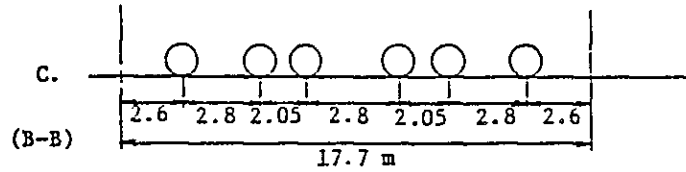
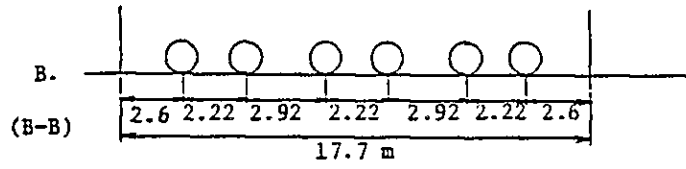
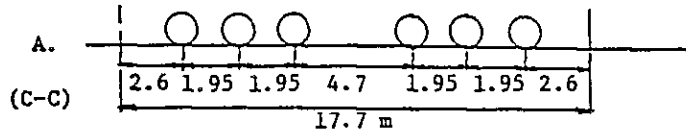
Type	maximum axle load	Max. Speed	Number in JNR (1981)
DD 13	14.15 ton	70 km/h	316
DD 14	15.03	70	43
DD 15	13.75	70	50
DD 16	13.	70	65
DD 51	15.0	95	640
DE 10	13.0	70	705
DE 11	13.2	70	116
DE 15	13.0	70	85
DF 50	14.3	90	25
EF 15	DC 14.3	75	70
EF 58	DC 14.4	100	110
EF 60	DC 16.0	90	134
EF 62	DC 16.0	100	52
EF 64	DC 16.0	100	111
EF 65	DC 16.0	100	309
ED 75	AC 16.8	100	300
ED 76	AC 16.0	100	139
EE 70	AC 16.0	100	81
EF 80	AC.DC 16.0	100	45
EF 81	AC.DC 16.8	100	156

Table A.3. Truck structure

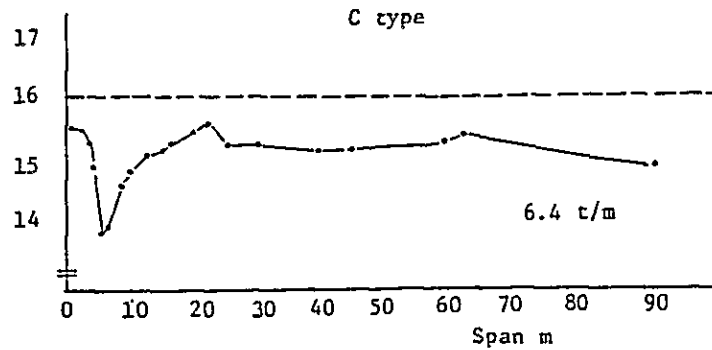
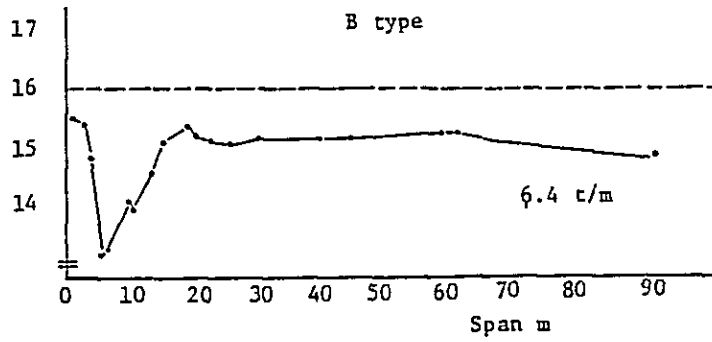
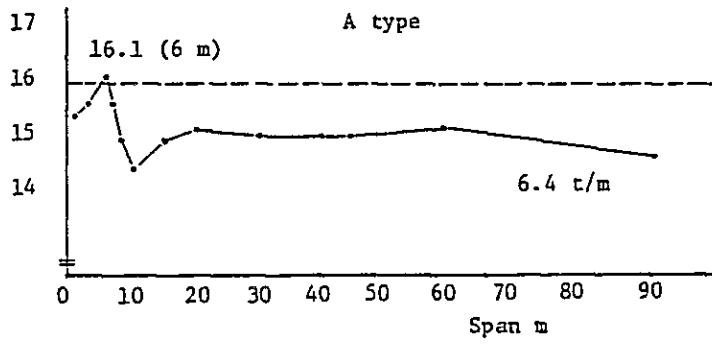
Track type	Passing tonnage million tons/year	Rail	Sleeper Pis/km	Ballast cm	Max Speed
A	3 - 5	40 N	Wooden 1480	20	85
B	5 - 8	50 N	Wooden 1560	25	95
C	8 - 10	50 N	P C 1560	25	100
D	10 - 20	50 N	P C 1760	25	110



図A.9 世界の電気機関車と軸重



$$(18.9 \times 6) / 6.4 = 17.72 \text{ m}$$



図A. 10 軸重18.9 ton 機関車のK.S.相当値

## Appendix 6 柱状图

PROJECT ..... Grade Separated  
 Crossing F/S  
 LOCATION ..... Manggarai Station  
 BORE HOLE ..... B-1  
 TOTAL DEPTH ... 22.50 M  
 TEST METHOD ... Rotary Drilling,  
 SPT, Sampling  
 TYPE OF MACHINE ... Tone/UD-5

COMMENCING DATE ... 23 August 1983  
 COMPLETION DATE ... 25 August 1983

DRILLED BY ..... Sjachrul/Sutarno

LOGGED BY ..... Idi Sadono

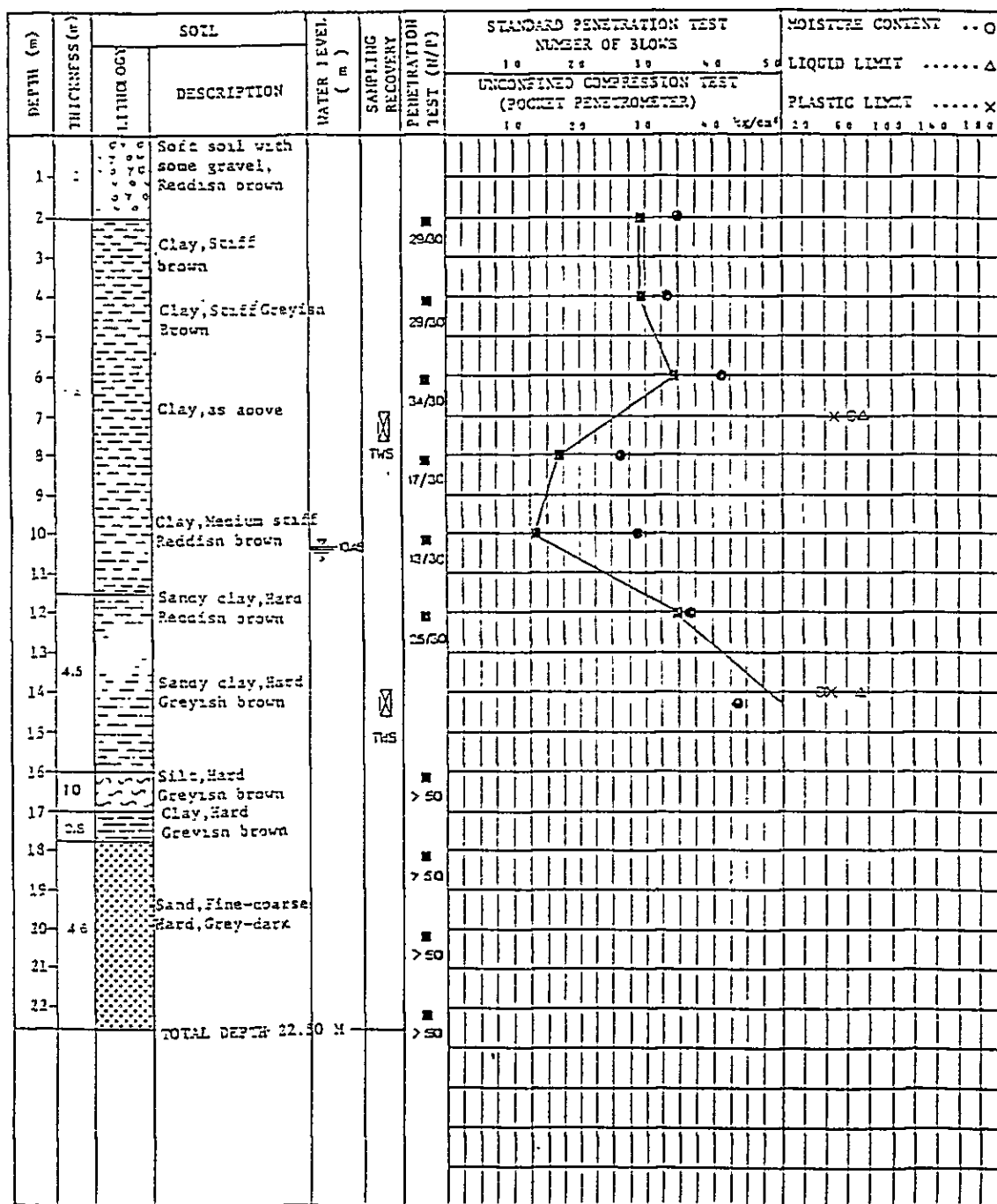


图 3.27 柱状图 (B-1)

PROJECT ..... Grade Separated  
 LOCATION ..... Manggarai Station  
 BORE HOLE ..... B-2  
 TOTAL DEPTH ... 13.30 M  
 TEST METHOD ... Rotary Drilling,  
 SPT, Sampling  
 TYPE OF MACHINE ... Tone/UD-5

COMMENCING DATE ... 26 August 1983  
 COMPLETION DATE ... 28 August 1983

DRILLED BY ..... Sjachrul/Sutarno

LOGGED BY ..... Idi Sadono

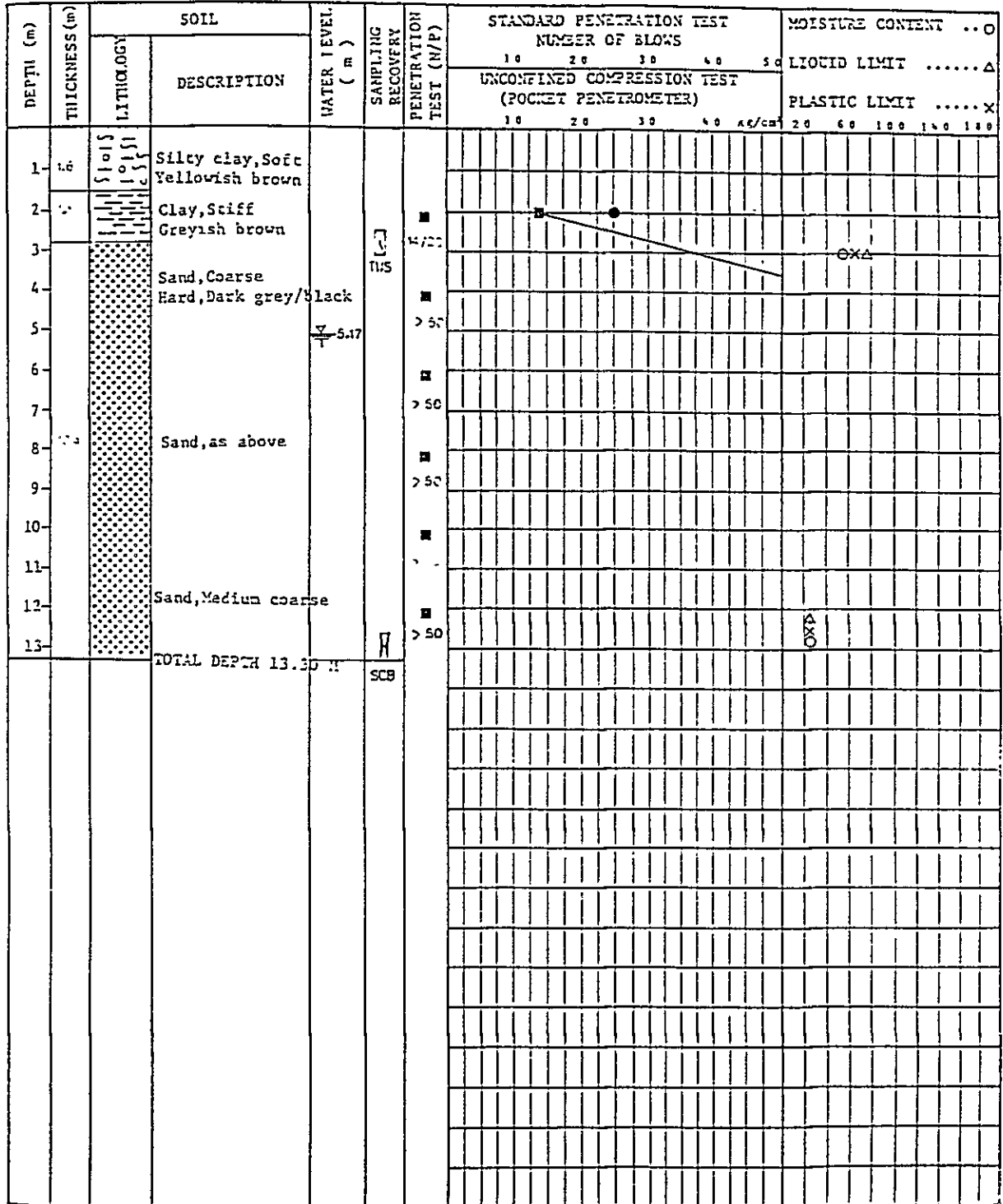


图 3.28 柱状图 (B-2)

PROJECT ..... Grade Separated  
 Crossing F/S  
 LOCATION ..... Manggarai Station  
 BORE HOLE ..... B-3  
 TOTAL DEPTH ... 18.40 M  
 TEST METHOD ... Rotary Drilling,  
 SPT, Sampling  
 TYPE OF MACHINE ... Tone/UD-5

COMMENCING DATE ... 30 August 1983  
 COMPLETION DATE ... 1 September 1983  
 DRILLED BY ..... Sjachrul/Sutarno  
 LOGGED BY ..... Idi Sadono

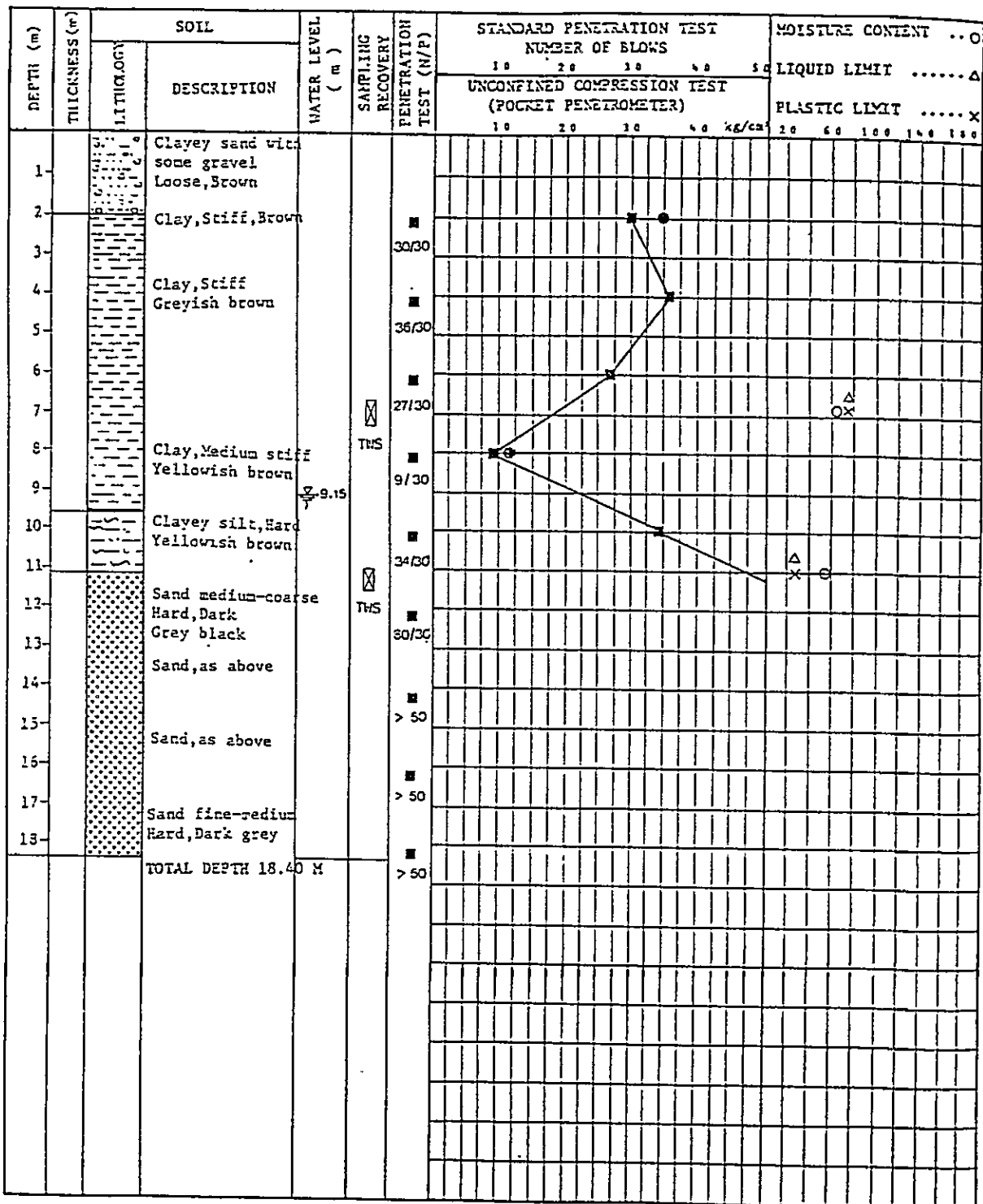


图 3.29 柱状图 (B-3)



PROJECT ..... Grade Separated  
 Crossing F/S  
 LOCATION ..... Manggarai Station  
 BORE HOLE ..... B-4  
 TOTAL DEPTH ... 24 M  
 TEST METHOD ... Rotary Drilling,  
 SPT, Sampling  
 TYPE OF MACHINE ... Tone/UD-5

COMMENCING DATE ... 19 August 1983  
 COMPLETION DATE ... 21 August 1983  
 DRILLED BY ..... Sjachrul/Sutarno  
 LOGGED BY ..... Idi Sadono

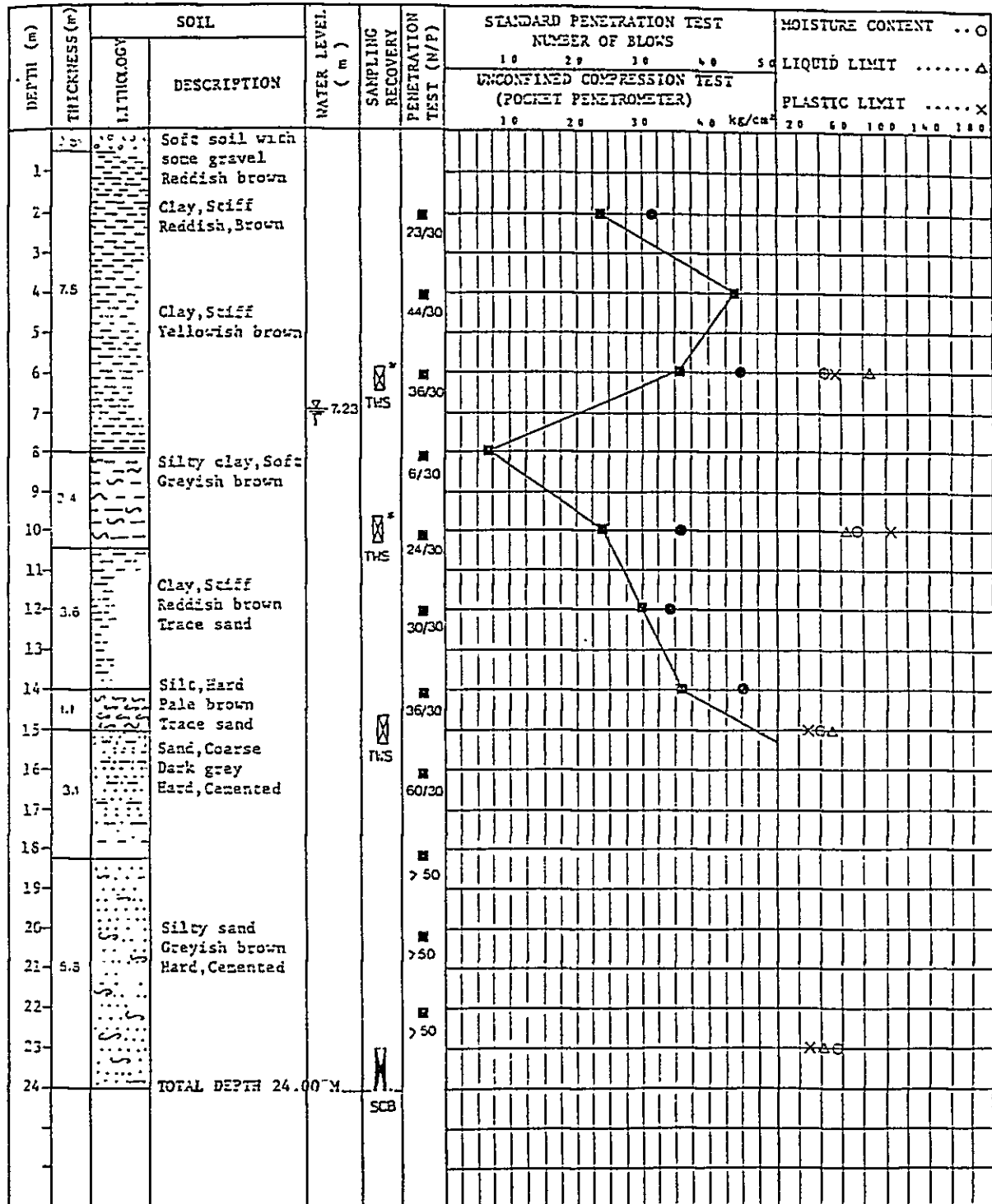
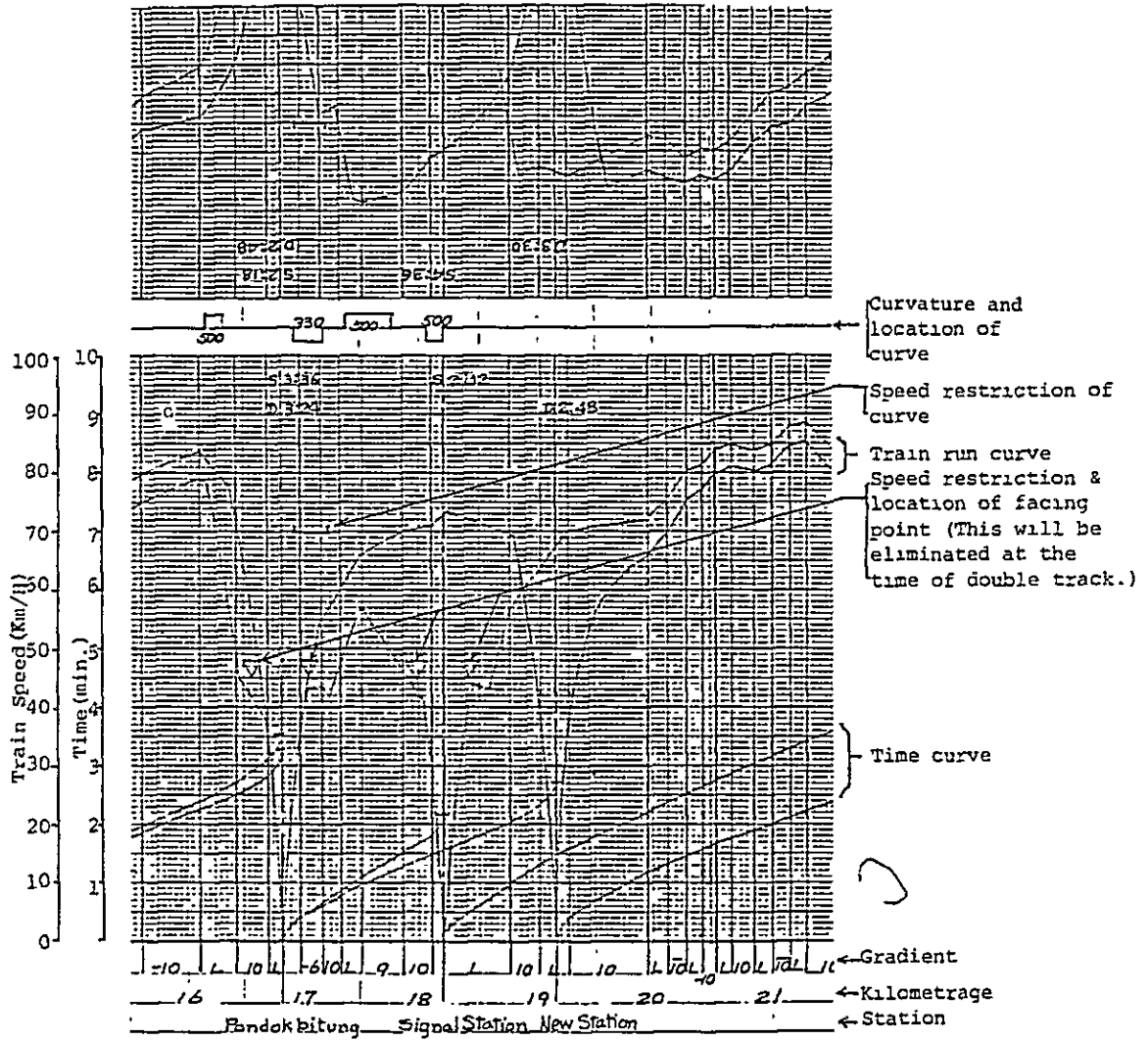


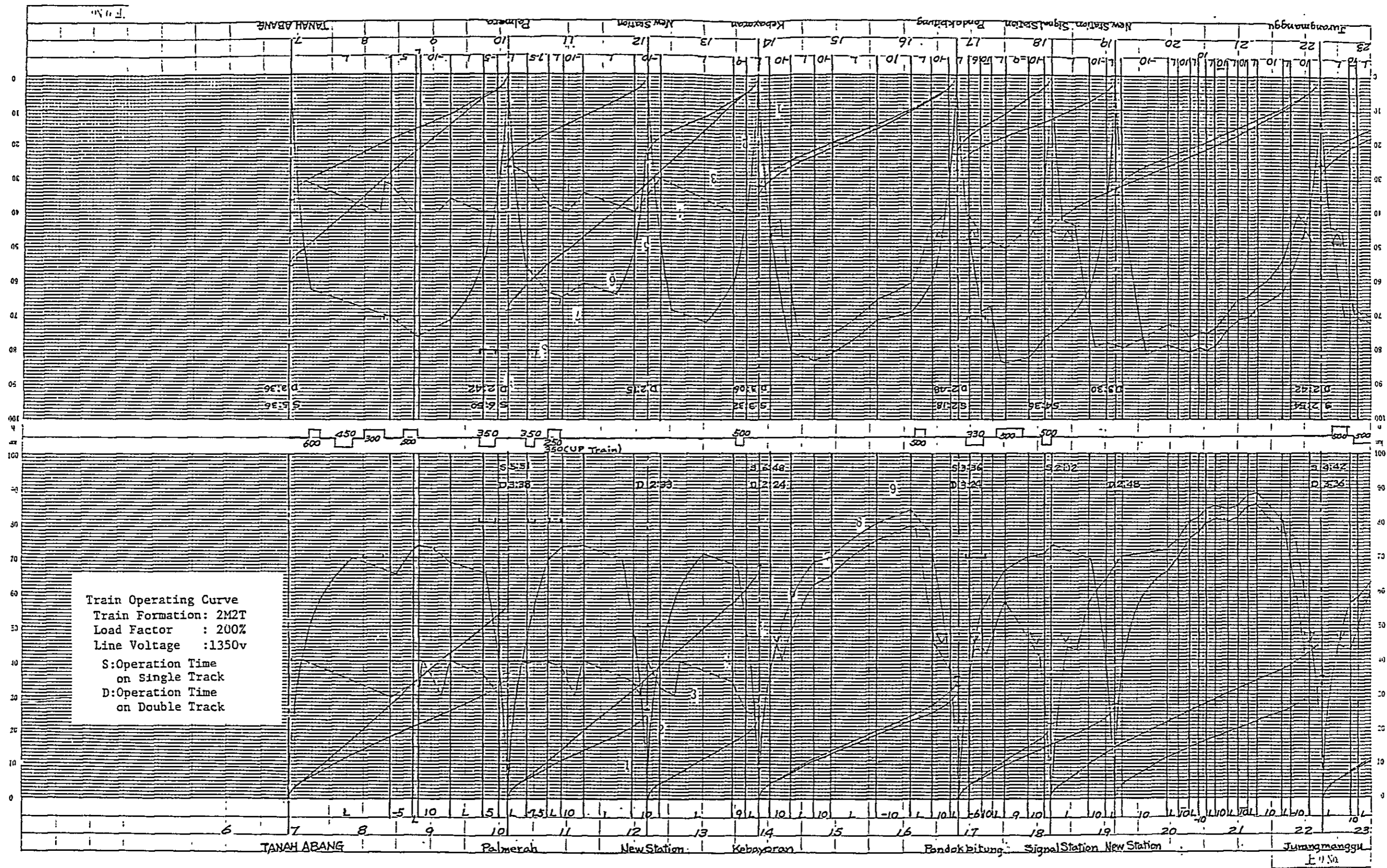
图 3.30 柱状图 (B-4)

Appendix 7

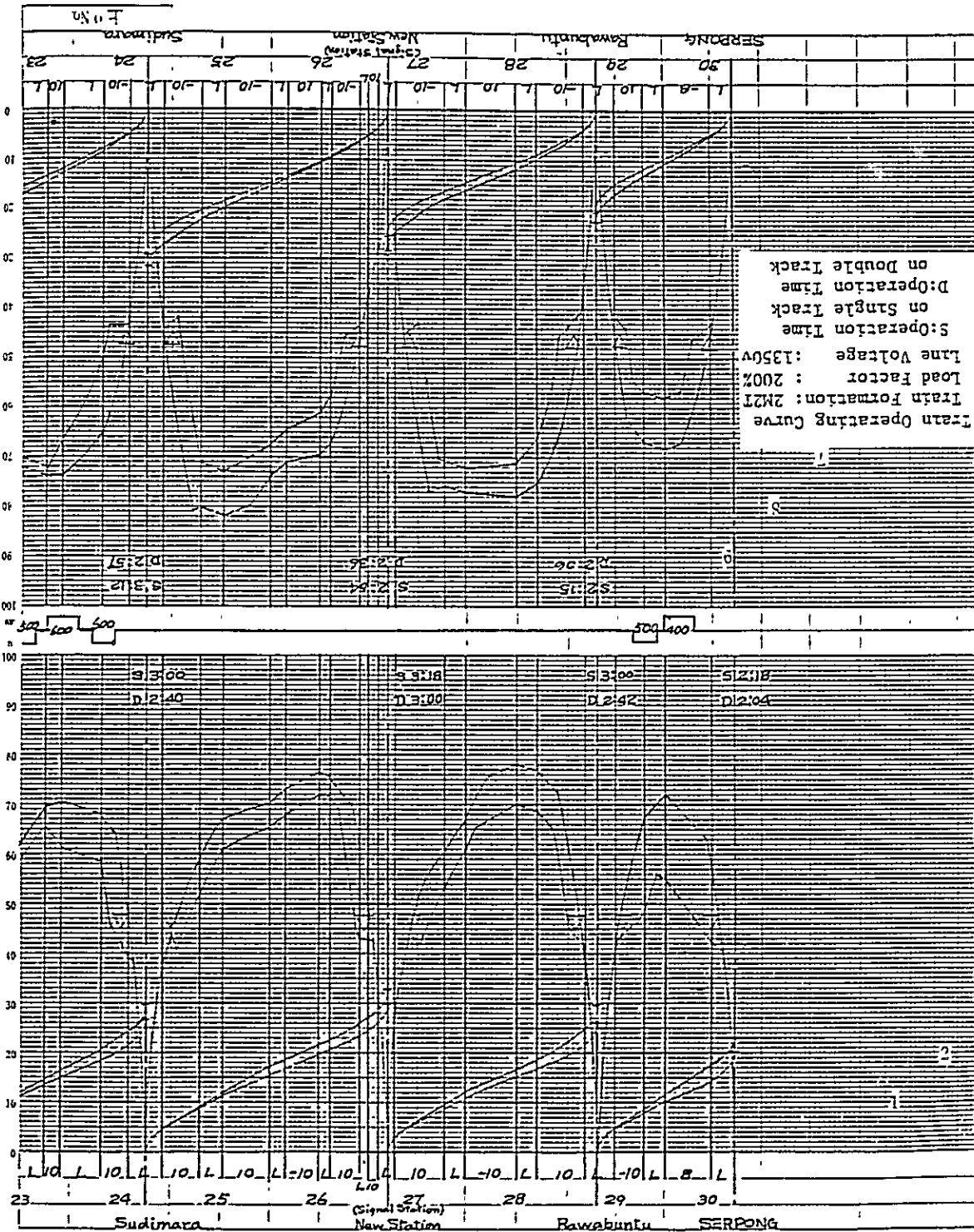
Merak 線, Tangerang 線の  
列車運転曲線

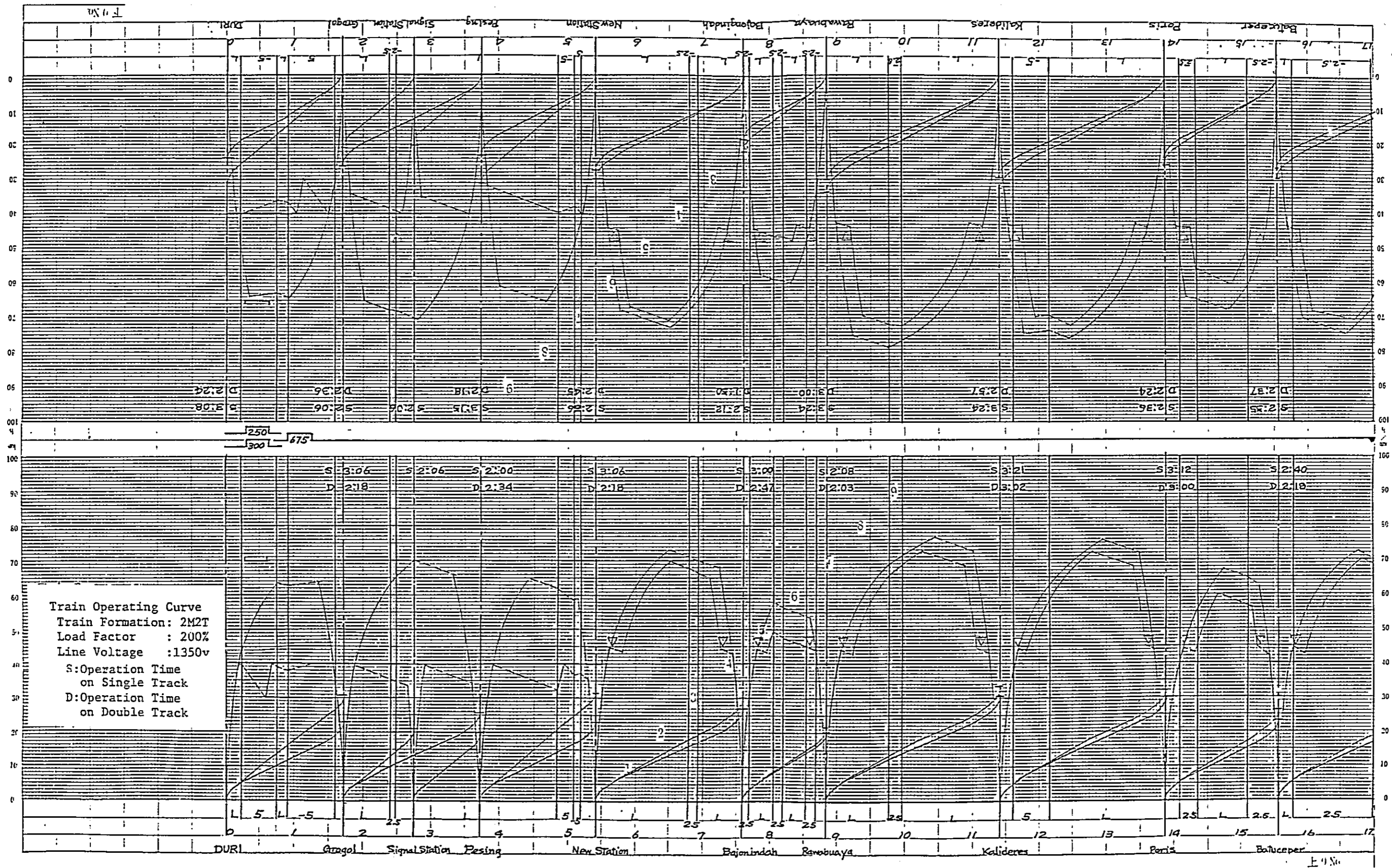






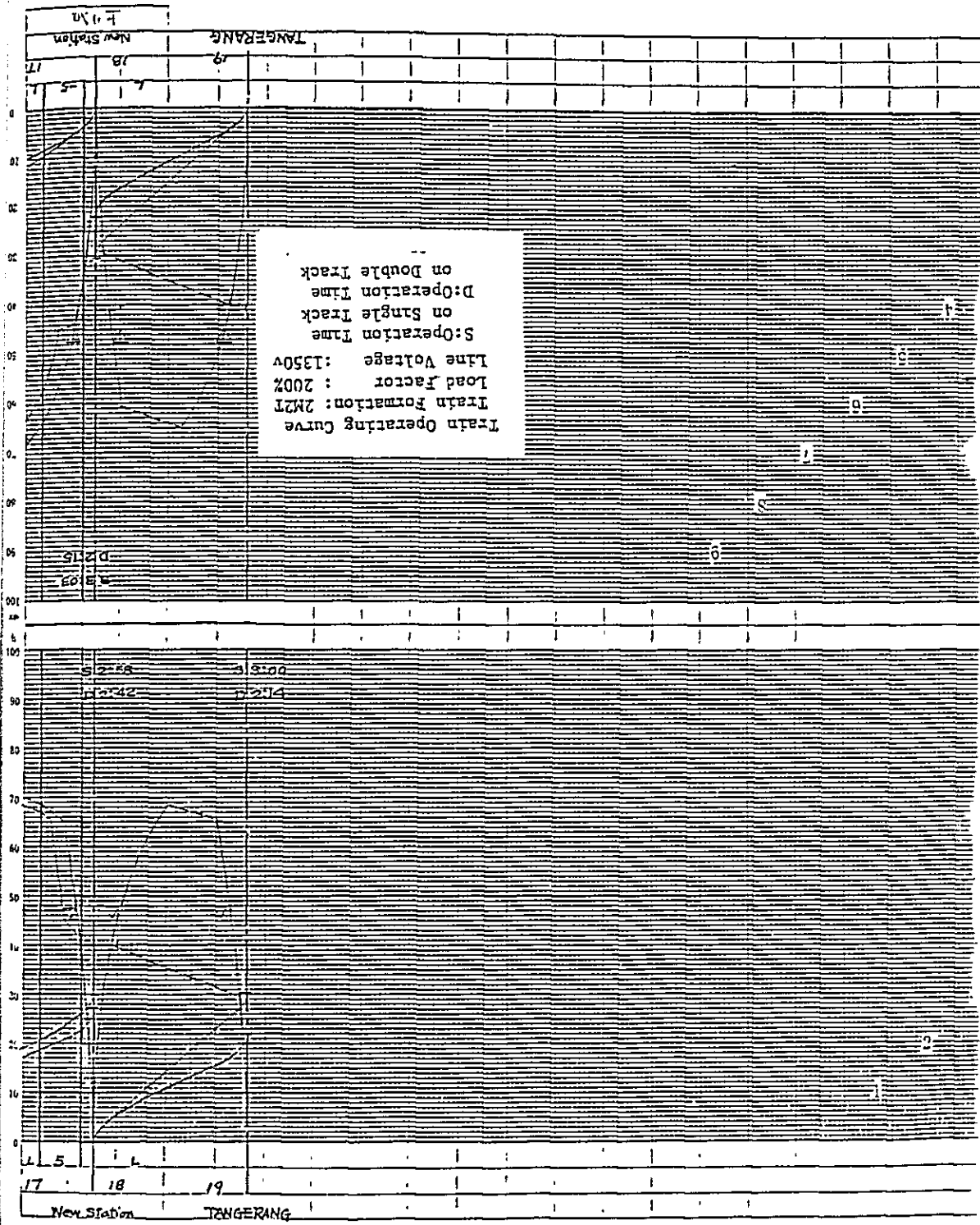












## Appendix 8

## 経済分析及び財務評価の結果

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 1 /PART 1

BASE CASE	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	372	2098	7538	8156	7054	7090	20224					36980			
WITH	372	2098	7538	8156	7054	7090	20224					36980			
ELECTRIFICATION															
SIGNALS & TELECOM		430	1710	2515	1434	1077									
CIVIL WORK	372	624	2092	320	320	1766									
LAND ACQ & COMP		248	3349	5321	5300	4247									
ROLLING STOCKS		803	347				20224					36980			
-SALVAGE VALUE															
MAINT/OPE COST DIFF			10	10	10	16	-11193	-12753	-14549	-16518	-18749	-19472	-30423	-41834	-53669
WITH			10	10	10	16	1607	1607	1607	1607	1607	1607	3404	3404	3404
RAIL															
ELECTRIC FAC							182	182	182	182	182	182	182	182	182
SIGNALS & TELECOM							165	165	165	165	165	165	165	165	165
CIVIL WORK							404	404	404	404	404	404	404	404	404
ROLLING STOCKS							708	708	708	708	708	2002	2002	2002	2002
PSNL COST			10	10	10	16	148	148	148	148	148	651	651	651	651
ELEC COST															
WITHOUT							12800	14360	16156	18125	20356	22876	33827	45237	57072
ROAD VEHICLE															
FUEL COST							4344	4873	5478	6146	6899	7750	10922	14169	17483
ENGINE OIL							238	267	300	337	378	425	612	805	1036
TYRE WEAR							253	284	320	358	402	452	770	1112	1480
MAINTENANCE COST							1564	1749	1972	2205	2473	2779	4257	5807	7413
MAINTENANCE LABOUR							15	17	19	21	24	27	42	57	73
VEHICLE COST							5761	6470	7280	8175	9190	10329	15545	21024	26745
PSNL COST							624	700	787	883	990	1114	1678	2263	2874
TOTAL BENEFIT							6310	7060	7923	8865	9948	11131	14564	18000	21340
PAS TIME SAVING							6310	7060	7923	8865	9948	11131	14564	18000	21340
NET FLOW	-372	-2098	-7547	-8165	-7064	-7107	-2721	19813	22472	25382	26697	-6377	44987	59834	75008
EIRR	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 2 /PART 1

BASE CASE	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP							4344	4873	5478	6146	6899	7750	10922	14169	17483
*DIESEL SAV KL							8675	9496	10686	11974	13421	15100	21201	27366	33641
*GASOLINE SAV KL							8265	9281	10423	11704	13154	14761	20661	27160	33606
EMPLOYMENT GENE PERSONS	73	206	1421	1857	1550	1419	324	120	120	120	120	894	519	519	519
WORKERS DURING CONST.	73	206	1412	1848	1541	1404	206					375			
PJKA EMPLOYEE			9	9	9	15	120	120	120	120	120	519	519	519	519
TOTAL COST SAV BENE	2206225														
TOTAL PAS TIME SAVING	704370														
TOTAL FUEL SAVE	667345														
TOTAL WORKERS	8855														

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 1 /PART 2

BASE CASE	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	715	36980		52584			52584			715		23061			-94720
WITH	715	36980		52584			52584			715		23061			-94720
ELECTRIFICATION SIGNALS & TELECOM CIVIL WORK LAND ACQ & COMP ROLLING STOCKS -SALVAGE VALUE	715									715		2837			
		36980		52584			52584					20224			94720
MAINT/OPE COST DIFF	-66059	-77076	-90589	-102767	-117217	-132384	-146139	-160591	-150986	-153231	-155695	-158295	-160934	-163513	-165635
WITH	3404	5347	5347	7187	7187	7187	9304	9304	9304	9304	9304	9304	9304	9304	9601
RAIL															
ELECTRIC FAC	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182
SIGNALS & TELECOM	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
CIVIL WORK	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404
ROLLING STOCKS	2002	3296	3296	5137	5137	5137	6977	6977	6977	6977	6977	6977	6977	6977	6977
PSNL COST	651	1299	1299	1299	1299	1299	1576	1576	1576	1576	1576	1576	1576	1576	1873
ELEC COST															
WITHOUT	69462	82422	95936	109954	124404	139571	155443	157895	160290	162535	164999	167599	170234	172817	175234
ROAD VEHICLE															
FUEL COST	20884	24379	27955	31591	35281	39064	42947	43602	44239	44858	45513	46206	46910	47594	48268
ENGINE OIL	1210	1424	1646	1872	2103	2342	2593	2634	2671	2708	2746	2789	2834	2874	2913
TYRE WEAR	1877	2310	2778	3275	3807	4379	5006	5089	5162	5231	5306	5397	5486	5565	5642
MAINTENANCE COST	9122	14933	12860	14826	16854	19034	21353	21636	21992	22228	22541	22893	23249	23577	23830
MAINTENANCE LABOUR	90	108	127	147	168	190	213	216	220	222	226	229	233	236	239
VEHICLE COST	32768	39076	45682	52609	59797	67376	75292	76490	77721	78889	80157	81430	82723	84051	85312
PSNL COST	3511	4193	4907	5635	6396	7184	8040	8178	8286	8398	8509	8655	8803	8919	9040
TOTAL BENEFIT	24686	27898	31027	34158	37094	40025	42711	43199	43822	44323	44961	45476	45997	46660	47194
PAS TIME SAVING	24686	27898	31027	34158	37094	40025	42711	43199	43822	44323	44961	45476	45997	46660	47194
NET FLOW	90030	67994	121616	84342	154311	172409	136266	191790	194808	196839	200657	180710	206931	210172	307549
EIRR	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 2 /PART 2

BASE CASE	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	20884	24379	27955	31591	35281	39064	42947	43602	44239	44858	45513	46206	46910	47594	48268
*DIESEL SAV KL	40040	46725	53571	60353	67219	74206	81590	82968	84062	85144	86267	87723	89203	90379	91543
*GASOLINE SAV KL	40250	46997	53897	61044	68309	75795	83325	84497	85816	87087	88446	89690	90951	92369	93735
EMPLOYMENT GENE PERSONS	547	1409	1034	1571	1034	1034	1785	1248	1248	1276	1248	1534	1248	1248	1483
WORKERS DURING CONST.	28	375		537			537			28		226			
PJKA EMPLOYEE	519	1034	1034	1034	1034	1034	1248	1248	1248	1248	1248	1248	1248	1248	1483
TOTAL COST SAV BENE															
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 1 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	446	2518	9045	9787	8465	8509	24269					44376			
WITH	446	2518	9045	9787	8465	8509	24269					44376			
ELECTRIFICATION		517	2076	3018	1721	1293									
SIGNALS & TELECOM		749	2510	384	384	2120									
CIVIL WORK	446	288	4043	6385	6360	5096									
LAND ACQ & COMP		964	417												
ROLLING STOCKS							24269					44376			
-SALVAGE VALUE															
MAINT/OPE COST DIFF			10	10	10	16	-12366	-14105	-16107	-18302	-20790	-21543	-33833	-46649	-59950
WITH			10	10	10	16	1899	1899	1899	1899	1899	3954	3954	3954	3954
RAIL															
ELECTRIC FAC							219	219	219	219	219	219	219	219	219
SIGNALS & TELECOM							198	198	198	198	198	198	198	198	198
CIVIL WORK							485	485	485	485	485	485	485	485	485
ROLLING STOCKS							849	849	849	849	849	2403	2403	2403	2403
PSNL COST			10	10	10	16	148	148	148	148	148	651	651	651	651
ELEC COST															
WITHOUT							18265	16004	18006	20201	22689	25498	37787	50604	63904
ROAD VEHICLE															
FUEL COST							4344	4873	5478	6146	6899	7750	10922	14169	17483
ENGINE OIL							238	267	300	337	378	425	612	805	1004
TYRE WEAR							253	284	320	358	402	452	770	1112	1480
MAINTENANCE COST							1877	2099	2366	2648	2968	3335	5108	6969	8894
MAINTENANCE LABOUR							15	17	19	21	24	27	42	57	73
VEHICLE COST							6914	7764	8736	9810	11028	12395	18464	25229	32094
PSNL COST							624	700	787	883	990	1114	1478	2263	2874
TOTAL BENEFIT							6310	7060	7923	8865	9948	11131	14564	18000	21340
PAS TIME SAVING							6310	7060	7923	8865	9948	11131	14564	18000	21340
NET FLOW	-446	-2518	-9055	-9796	-8475	-8525	-5592	21145	26030	27166	30738	-11702	48396	64649	81289
EIRR	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 2 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP							4344	4873	5478	6146	6899	7750	10922	14169	17483
*DIESEL SAV KL							8475	9496	10686	11974	13421	15100	21201	27366	33641
*GASOLINE SAV KL							8265	9281	10423	11704	13154	14761	20861	27160	33666
EMPLOYMENT ONE PERSONS	73	206	1421	1857	1550	1419	326	320	320	320	320	894	519	519	519
WORKERS DURING CONST.	73	206	1412	1848	1541	1404	206	206	206	206	206	375			
PJKA EMPLOYEE			9	9	9	15	120	120	120	120	120	519	519	519	519
TOTAL COST SAV BENE	2474345														
TOTAL PAS TIME SAVING	704370														
TOTAL FUEL SAVE	667345														
TOTAL WORKERS	8855														

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	858	44376		63101			63101			858		27673			-113664
WITH	858	44376		63101			63101			858		27673			-113664
ELECTRIFICATION															
SIGNALS & TELECOM	858									858		3404			
CIVIL WORK															
LAND ACQ & CONP		44376		63101			63101					24269			
ROLLING STOCKS															113664
-SALVAGE VALUE															
MAINT/OPE COST DIFF	-73866	-86268	-101404	-115077	-131370	-148488	-163923	-166681	-169303	-171909	-174689	-177614	-180583	-183493	-185918
WITH	3954	6156	6156	8365	8365	8365	10850	10850	10850	10850	10850	10850	10850	10850	11147
RAIL															
ELECTRIC FAC	219	219	219	219	219	219	219	219	219	219	219	219	219	219	219
SIGNALS & TELECOM	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198
CIVIL WORK	485	485	485	485	485	485	485	485	485	485	485	485	485	485	485
ROLLING STOCKS	2403	3956	3956	6164	6164	6164	8373	8373	8373	8373	8373	8373	8373	8373	8373
PSHL COST	651	1299	1299	1299	1299	1299	1576	1576	1576	1576	1576	1576	1576	1576	1673
ELEC COST															
WITHOUT	77840	92424	107640	123441	139735	156653	174772	177531	180232	182759	185539	188463	191433	194342	197065
ROAD VEHICLE															
FUEL COST	20884	24379	27955	31591	35281	39064	42947	43602	44239	44858	45513	46206	46910	47594	48260
ENGINE OIL	1210	1424	1646	1872	2103	2342	2593	2634	2671	2708	2746	2789	2834	2874	2913
TYRE WEAR	1677	2310	2778	3275	3807	4379	5004	5289	5162	5233	5308	5397	5486	5565	5642
MAINTENANCE COST	10946	13120	15409	17791	20225	22841	25424	26023	26390	26673	27049	27471	27899	28292	28596
MAINTENANCE LABOUR	90	108	127	147	168	190	213	216	220	222	226	229	233	236	239
VEHICLE COST	39322	46891	54819	63131	71756	80851	90350	91788	93265	94666	96188	97716	99268	100862	102374
PSHL COST	3511	4193	4907	5635	6396	7186	8040	8178	8286	8398	8509	8655	8803	8919	9040
TOTAL BENEFIT	24686	27898	31027	34158	37094	40025	42711	43199	43822	44323	44961	45476	45997	46660	47194
PAS TIME SAVING	24686	27898	31027	34158	37094	40025	42711	43199	43822	44323	44961	45476	45997	46660	47194
NET FLOW	97714	69790	132511	86134	168464	186513	143513	209880	213204	215374	219631	195417	226580	230152	346774
EIRR	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 2 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	20884	24379	27955	31591	35281	39064	42947	43602	44239	44858	45513	46206	46910	47594	48260
*DIESEL SAV KL	40040	46725	53571	60353	67219	74206	81590	82968	84662	85144	86267	87723	89203	90379	91543
*GASOLINE SAV KL	40250	46997	53897	61044	68309	75795	83325	84497	85816	87087	88446	89690	90951	92369	93735
EMPLOYMENT GENE PERSONS	547	1609	1034	1571	1034	1034	1785	1248	1248	1276	1248	1534	1248	1248	1483
WORKERS DURING CONST.	28	375		537			537			28		286			
PJKA EMPLOYEE	519	1034	1034	1034	1034	1034	1248	1248	1248	1248	1248	1248	1248	1248	1483
TOTAL COST SAV BENE															
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 1 /PART 1

CASE 2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	372	2098	7538	8156	7054	7090	20224					36980			
WITH	372	2098	7538	8156	7054	7090	20224					36980			
ELECTRIFICATION		430	1730	2515	1434	1077									
SIGNALS & TELECOM		424	2092	320	320	1766									
CIVIL WORK	372	260	3369	5321	5300	4247									
LAND ACQ & CONP		803	347												
ROLLING STOCKS							20224					36980			
-SALVAGE VALUE															
MAINT/OPER COST DIFF			10	10	10	16	-7976	-9145	-10449	-11964	-13615	-13725	-22104	-30848	-39934
WITH			10	10	10	16	1607	1607	1607	1607	1607	3404	3404	3404	3404
RAIL															
ELECTRIC FAC							182	182	182	182	182	182	182	182	182
SIGNALS & TELECOM							165	165	165	165	165	165	165	165	165
CIVIL WORK							404	404	404	404	404	404	404	404	404
ROLLING STOCKS							708	708	708	708	708	2002	2002	2002	2002
PSNL COST			10	10	10	16	148	148	148	148	148	651	651	651	651
ELEC COST															
WITHOUT							9584	10752	12096	13571	15242	17129	25508	34252	43338
ROAD VEHICLE															
FUEL COST							3780	4291	4767	5349	6005	6746	9843	13049	16362
ENGINE OIL							193	217	244	273	307	345	508	677	852
TYRE WEAR							102	115	129	145	162	183	301	428	563
MAINTENANCE COST							1029	1150	1297	1459	1627	1828	2773	3762	4783
MAINTENANCE LABOUR							70	71	72	73	74	75	76	77	78
VEHICLE COST							4033	4529	5096	5723	6433	7231	10882	14717	18731
PSNL COST							437	490	551	610	693	780	1175	1584	2012
TOTAL BENEFIT							4417	4942	5546	6205	6963	7792	10194	12600	14958
PAS TIME SAVING							4417	4942	5546	6205	6963	7792	10194	12600	14958
NET FLOW	-372	-2098	-7547	-8165	-7064	-7107	-7831	14087	16035	18169	20598	-15463	32299	43448	54872
EIRR	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 2 /PART 1

CASE 2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP							3780	4291	4767	5349	6005	6746	9843	13049	16362
*DIESEL SAV KL							7490	8392	9444	10583	11862	13345	19460	25727	32190
*GASOLINE SAV KL							7107	7981	8964	10060	11318	12702	18539	24631	30933
EMPLOYMENT BENE PERSONS	73	206	1421	1857	1550	1419	326	320	320	320	320	894	519	519	519
WORKERS DURING CONST.	73	206	1412	1848	1541	1404	206	206	206	206	206	373	519	519	519
PJKA EMPLOYEE			9	9	9	15	120	120	120	120	120	519	519	519	519
TOTAL COST SAV BENE	2656140														
TOTAL PAS TIME SAVING	493059														
TOTAL FUEL SAVE	657257														
TOTAL WORKERS	8855														

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*  
 ( MIL. RP. )

PAGE 1 / PART 2

CASE 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	715	36980		52584			52584			715		23061			-94720
WITH	715	36980		52584			52584			715		23061			-94720
ELECTRIFICATION SIGNALS & TELECOM CIVIL WORK LAND ACQ & COMP ROLLING STOCKS -SALVAGE VALUE	715									715		2837			
		36980		52584			52584					20224			94720
MAINT/OPR COST DIFF	-49657	-57488	-67901	-76876	-88044	-99769	-109936	-111819	-113658	-115392	-117284	-119281	-121308	-123289	-124861
WITH	3404	5347	5347	7187	7187	7187	9304	9304	9304	9304	9304	9304	9304	9304	9601
RAIL	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182
ELECTRIC FAC	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
SIGNALS & TELECOM	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404
CIVIL WORK	2002	3296	3296	5137	5137	5137	6977	6977	6977	6977	6977	6977	6977	6977	6977
ROLLING STOCKS	651	1299	1299	1299	1299	1299	1576	1576	1576	1576	1576	1576	1576	1576	1873
PSNL COST															
ELEC COST															
WITHOUT	52561	62835	73248	84063	95231	106957	119240	131123	142962	154696	166588	178585	190612	202693	214842
ROAD VEHICLE															
FUEL COST	19882	23380	27087	30904	34826	38899	43136	47649	52462	57584	63024	68893	75200	82064	89493
ENGINE OIL	1834	1225	1424	1628	1838	2057	2287	2538	2811	3106	3424	3767	4136	4531	4954
TYRE WEAR	708	865	1053	1211	1400	1602	1822	2061	2320	2600	2902	3227	3577	3954	4358
MAINTENANCE COST	5465	7010	8212	9459	10729	12088	13531	15161	16980	19000	21333	23984	26967	30300	34000
LABOUR	56	67	79	91	104	117	131	146	162	179	197	216	236	257	280
VEHICLE COST	22938	27353	31977	36826	41858	47163	52744	58605	64758	71214	78084	85371	93098	101278	110033
PSNL COST	2458	2935	3435	3965	4537	5152	5811	6516	7269	8072	8926	9833	10796	11817	12898
TOTAL BENEFIT	17280	19529	21719	23911	25966	28018	29898	32339	36675	31026	31473	31833	32198	32662	33036
PAS TIME SAVING	17280	19529	21719	23911	25966	28018	29898	32339	36675	31026	31473	31833	32198	32662	33036
NET FLOW	66023	40037	89620	48203	114009	127787	87249	162058	144333	145703	148757	128054	153506	155951	252617
EIRR	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*  
 ( MIL. RP. )

PAGE 2 / PART 2

CASE 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	19882	23380	27087	30904	34826	38899	43136	47649	52462	57584	63024	68893	75200	82064	89493
*DIESEL SAV KL	38869	45929	53256	60632	68212	76033	84393	93219	102619	112604	123284	134671	146776	159609	173280
*GASOLINE SAV KL	37503	44253	51236	58549	66066	73907	82189	90975	100307	110214	120724	131867	143674	156269	169683
EMPLOYMENT BENE PERSONS	547	1009	1034	1571	1034	1034	1785	1248	1248	1248	1248	1534	1248	1248	1483
WORKERS DURING CONST.	28	375		537			537				28				
PJKA EMPLOYEE	519	1034	1034	1034	1034	1034	1248	1248	1248	1248	1248	1248	1248	1248	1483
TOTAL COST SAV BENE															
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 1 / PART 1

CASE J

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>INVESTMENT DIFF</b>	446	2518	9045	9787	8465	8509	24269					44376			
<b>WITH</b>	446	2518	9045	9787	8465	8509	24269					44376			
ELECTRIFICATION		517	2076	3018	1721	1293									
SIGNALS & TELECOM		749	2510	304	304	2120									
CIVIL WORK	446	208	4093	6305	6300	5096									
LAND ACQ & COMP		964	417												
ROLLING STOCKS							24269					44376			
-SALVAGE VALUE															
<b>MAINT/OPE COST DIFF</b>			10	10	10	16	-8697	-9989	-11476	-13107	-14955	-14986	-24285	-33994	-44685
<b>WITH</b>			10	10	10	16	1899	1899	1899	1899	1899	3954	3954	3954	3954
<b>RAIL</b>							219	219	219	219	219	219	219	219	219
ELECTRIC FAC							198	198	198	198	198	198	198	198	198
SIGNALS & TELECOM							485	485	485	485	485	485	485	485	485
CIVIL WORK							849	849	849	849	849	2403	2403	2403	2403
ROLLING STOCKS							148	148	148	148	148	451	451	451	451
PSNL COST			10	10	10	16									
ELEC COST															
<b>WITHOUT</b>							10596	11888	13175	15006	16854	18941	28239	37948	44039
<b>ROAD VEHICLE</b>							3780	4241	4767	5349	6005	6746	9843	13049	16362
FUEL COST							193	217	264	273	307	345	508	677	852
ENGINE OIL							102	115	129	145	162	183	301	428	563
TYRE WEAR							1234	1340	1556	1740	1952	2193	3328	4514	5740
MAINTENANCE COST							18	11	12	14	15	17	26	36	46
MAINTENANCE LABOUR							4840	5435	6115	6867	7720	8677	13058	17660	22466
VEHICLE COST							437	440	551	618	693	780	1175	1584	2012
PSNL COST															
<b>TOTAL BENEFIT</b>							4417	4942	5546	6205	6963	7792	10194	12600	14938
<b>PAS TIME SAVING</b>							4417	4942	5546	6205	6963	7792	10194	12600	14938
<b>NET FLOW</b>	-446	-2518	-9055	-9796	-8475	-8525	-11155	14931	17022	19312	21919	-21598	34479	46594	59023
<b>EIRR</b>	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 2 / PART 1

CASE J

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>ADDITIONAL INDEX</b>															
<b>FUEL SAV EFFECT MIL RP</b>							3780	4241	4767	5349	6005	6746	9843	13049	16362
*DIESEL SAV KL							7490	8392	9464	10583	11862	13345	19440	25727	32190
*GASOLINE SAV KL							7107	7981	8966	10068	11318	12702	18539	24631	30933
<b>EMPLOYMENT GENE PERSONS</b>	73	206	1421	1857	1550	1419	326	120	120	120	120	494	519	519	519
WORKERS DURING CONST.	73	206	1412	1848	1541	1404	206					375			
PJKA EMPLOYEE			9	9	9	15	120	120	120	120	120	519	519	519	519
<b>TOTAL COST SAV BENE</b>	1831440														
<b>TOTAL PAS TIME SAVING</b>	493059														
<b>TOTAL FUEL SAVE</b>	657257														
<b>TOTAL WORKERS</b>	8855														



\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN KANGARAI STATION \*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	858	44376		63101			63101			858		27673			-113664
WITH	858	44376		63101			63101			858		27673			-113664
ELECTRIFICATION SIGNALS & TELECOM CIVIL WORK LAND ACQ & COMP ROLLING STOCKS -SALVAGE VALUE	858									858		3404			
		44376		63101			63101					24269			113664
MAINT/OPE COST DIFF	-54667	-63552	-75130	-84955	-97383	-110442	-121637	-123730	-125780	-127708	-129818	-132038	-134291	-136499	-138280
WITH	3954	6156	6156	8365	8365	8365	10850	10850	10850	10850	10850	10850	10850	10850	11147
RAIL															
ELECTRIC FAC	219	219	219	219	219	219	219	219	219	219	219	219	219	219	219
SIGNALS & TELECOM	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198
CIVIL WORK	485	485	485	485	485	485	485	485	485	485	485	485	485	485	485
ROLLING STOCKS	2403	3956	3956	6164	6164	6164	8373	8373	8373	8373	8373	8373	8373	8373	8373
PSNL COST	651	1299	1299	1299	1299	1299	1576	1576	1576	1576	1576	1576	1576	1576	1873
ELEC COST															
WITHOUT	58622	69708	81286	93320	105748	118807	132487	134580	136630	138558	140668	142887	145141	147349	149427
ROAD VEHICLE															
FUEL COST	19802	23388	27887	30904	34826	38899	43136	43803	44449	45076	45742	46448	47166	47861	48536
ENGINE OIL	1034	1225	1424	1628	1838	2057	2287	2324	2357	2389	2423	2462	2501	2537	2571
TYRE WEAR	708	865	1033	1211	1400	1602	1822	1852	1879	1905	1932	1964	1997	2025	2053
MAINTENANCE COST	7039	8412	9855	11350	12878	14506	16238	16492	16726	16986	17144	17413	17685	17934	18129
MAINTENANCE LABOUR	56	67	79	91	104	117	131	133	135	137	139	141	143	145	147
VEHICLE COST	27525	32823	38373	44191	50229	56596	63245	64252	65284	66266	67332	68401	69487	70603	71662
PSNL COST	2458	2935	3435	3945	4477	5030	5628	5725	5800	5879	5956	6058	6162	6263	6328
TOTAL BENEFIT	17280	19529	21719	23911	25966	28018	29898	30239	30675	31026	31473	31833	32198	32662	33036
PAS TIME SAVING	17280	19529	21719	23911	25966	28018	29898	30239	30675	31026	31473	31833	32198	32662	33036
NET FLOW	71090	38704	96848	45765	123349	138440	88434	153970	156456	157876	161291	136198	166489	169161	284980
EIRR	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2

\*\* ECONOMIC ANALYSIS FOR GRADE SEPARATED CROSSING IN KANGARAI STATION \*\*

( MIL. RP. ) PAGE 2 /PART 2

CASE 3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
ADDITIONAL INDEX																
FUEL SAV EFFECT MIL RP	19802	23388	27887	30904	34826	38899	43136	43803	44449	45076	45742	46448	47166	47861	48536	
*DIESEL SAV KL	38669	45929	53256	60632	68212	76033	84393	85819	86951	88073	89234	90742	92274	93491	94697	
*GASOLINE SAV KL	37503	44253	51236	58549	66066	73907	81898	83475	84403	85668	87033	88284	89552	90978	92343	
EMPLOYMENT GENE PERSONS WORKERS DURING CONST. PJKA EMPLOYEE	547 28 519	1409 375 1034	1034 537 1034	1571 537 1034	1034 537 1034	1034 537 1034	1785 537 1248	1248 537 1248	1248 537 1248	1276 28 1248	1248 286 1248	1248 286 1248	1248 286 1248	1248 286 1248	1248 286 1248	1483 286 1483
TOTAL COST SAV BENE																
TOTAL PAS TIME SAVING																
TOTAL FUEL SAVE																
TOTAL WORKERS																

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 1 /PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
OPERATING PROFIT			-10	-10	-10	-16	-586	-272	79	473	914	-2237	-1235	-115	1135
OPERATING REVENUE							2594	2907	3250	3652	4094	4588	5590	6710	7940
OPERATING EXPENSE			10	10	10	16	3179	3179	3179	3179	3179	6825	6825	6825	6825
WORKING COST			10	10	10	16	1638	1638	1638	1638	1638	3435	3435	3435	3435
MAINTENANCE COST							1490	1490	1490	1490	1490	2784	2784	2784	2784
PERSONNEL COST			10	10	10	16	148	148	148	148	148	651	651	651	651
ELEC COST															
DEPRECIATION							1541	1541	1541	1541	1541	3390	3390	3390	3390
NET PROFIT			-10	-10	-10	-16	-2143	-1783	-1385	-945	-458	-4617	-3513	-2291	-940
TOTAL ASSETS	400	1736	9332	18152	25764	33220	51903	56362	68821	47280	45739	79330	75940	72530	49160
INT. ON TOTAL ASSETS							1557	1511	1465	1418	1372	2380	2278	2176	2075
INVESTMENT	400	2400	8056	8820	7612	7456	20224					36980			
FOREIGN TOTAL	212	964	4540	4276	3808	4572	20020					36608			
LOCAL TOTAL	188	1436	3516	4544	3804	2884	284					372			
ELECTRIFICATION		452	1820	2444	1508	1132									
FOREIGN CURRENCY		208	864	1248	712	532									
LOCAL CURRENCY		244	956	1196	796	600									
SIGNALS & TELECOM		624	2172	332	332	1436									
FOREIGN CURRENCY		624	1776	264	264	1472									
LOCAL CURRENCY			396	68	68	364									
CIVIL WORK	400	260	3604	5844	5772	4488									
FOREIGN CURRENCY	212	132	1900	2764	2832	2568									
LOCAL CURRENCY	188	128	1704	3080	2940	1920									
LAND ACQ & COMP		1064	460												
LOCAL CURRENCY		1064	460												
ROLLING STOCK							20224					36980			
FOREIGN CURRENCY							20020					36608			
LOCAL CURRENCY							204					372			
-SALVAGE VALUE															

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 2 /PART 1

BASE CASE

	1986	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INT DURING CONST.	6	38	186	369	543	742									

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( I N D O N E S I A ) PAGE 2 /PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
OPERATING PROFIT	2527	283	2002	-560	1552	3890	1729	2013	2101	2593	2849	3189	3492	3800	3814
OPERATING REVENUE	9351	10900	12619	14526	16639	18977	21561	21846	22134	22426	22721	23021	23325	23632	23944
OPERATING EXPENSE	6825	10617	10617	15086	15086	15066	19832	19832	19832	19832	19832	19832	19832	19832	20130
WORKING COST	3435	5378	5378	7218	7218	7218	9335	9335	9335	9335	9335	9335	9335	9335	9632
MAINTENANCE COST	2744	4079	4079	5919	5919	5919	7759	7759	7759	7759	7759	7759	7759	7759	7759
PERSONNEL COST	651	1299	1299	1299	1299	1299	1576	1576	1576	1576	1576	1576	1576	1576	1673
ELEC COST															
DEPRECIATION	1390	5239	5239	7868	7868	7868	10497	10497	10497	10497	10497	10497	10497	10497	10497
NET PROFIT	531	-2665	-788	-4692	-2344	230	-3194	-2595	-1992	-1407	-798	-876	-258	365	694
TOTAL ASSETS	66518	98259	93020	137736	129868	122000	164087	153989	143092	133343	122845	115496	124999	114501	104004
INT. ON TOTAL ASSETS	1998	2948	2791	4132	3896	3660	4923	4608	4293	4000	3685	3485	3750	3435	3120
INVESTMENT	748	36980		52584			52584			748		23148			
FOREIGN TOTAL	584	36608		52052			52052			584		22508			
LOCAL TOTAL	164	372		532			532			164		640			
ELECTRIFICATION															
FOREIGN CURRENCY															
LOCAL CURRENCY															
SIGNALS & TELECOM	748									748		2924			
FOREIGN CURRENCY	584									584		2488			
LOCAL CURRENCY	164									164		436			
CIVIL WORK															
FOREIGN CURRENCY															
LOCAL CURRENCY															
LAND ACQ & CONP															
LOCAL CURRENCY															
ROLLING STOCK		36980		52584			52584					20224			
FOREIGN CURRENCY		36608		52052			52052					20020			
LOCAL CURRENCY		372		532			532					204			
-SALVAGE VALUE															95750

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( I N D O N E S I A ) PAGE 2 /PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INT DURING CONST.															

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 3 / PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>FINANCE PROGRAM</b>															
<b>FINANCE TOTAL</b>															
BORROWING	406	2438	8242	9189	8155	8198									
REPAYMENT	406	2844	11087	20276	28431	36629	36629	36629	36629	36629	36629	36629	36629	36629	36629
BALANCE							810	810	810	810	810	810	810	810	810
INTEREST															
<b>FINANCE IN FOREIGN CNY</b>															
BORROWING	218	1002	4726	4645	4351	5314									
REPAYMENT	218	1220	5947	10592	14943	20257	20257	20257	20257	20257	20257	20257	20257	20257	20257
BALANCE							810	810	810	810	810	810	810	810	810
INTEREST															
<b>FINANCE IN LOCAL CNY 1</b>															
BORROWING	188	1436	3516	4544	3804	2884									
REPAYMENT	188	1624	5140	9684	13488	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372
BALANCE															
INTEREST															
<b>FINANCE IN LOCAL CNY 2</b>															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>															
			-10	-10	-10	-16	-20079	459	810	1204	1645	-36637	1345	2465	3714
<b>CASH IN</b>															
	406	2438	8233	9100	8145	8182	955	1269	1620	2014	2455	1153	2155	3275	4525
<b>OPERATING PROFIT DEPRECIATION BORROWING</b>															
	406	2438	8242	9109	8155	8198									
<b>CASH OUT</b>															
	406	2438	8242	9109	8155	8198	21034	810	810	810	810	37790	810	810	810
<b>INVESTMENT INT DURING CONST. REPAYMENT INTEREST</b>															
	400	2400	8054	8820	7612	7456	20224					36980			
	6	38	186	369	543	742		810	810	810	810	810	810	810	810

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 4 / PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
CM1 OPE REVENUE							2594	5501	8759	12411	16505	21093	26683	33393	41353
CM1 OPE PROFIT			-10	-19	-29	-45	-631	-903	-124	-351	564	-1673	-2908	-3022	-1888
CM1 NET PROFIT			-10	-19	-29	-45	-2188	-3971	-5356	-6302	-6759	-11376	-14889	-17180	-18120
CM1 INVESTMENT	400	2800	10856	19676	27188	34746	54968	54968	54968	54968	54968	91948	91948	91948	91948
CM1 REPAYMENT															
CM1 INTEREST							810	1621	2431	3241	4051	4862	5672	6482	7292
CM1 NET CASHFLOW			-10	-19	-29	-45	-20124	-19665	-18856	-17652	-16007	-52644	-51299	-48834	-45120

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 3 /PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>FINANCE PROGRAM</b>															
<b>FINANCE TOTAL</b>															
BORROWING															
REPAYMENT	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013
BALANCE	35616	34603	33590	32577	31565	30552	29539	28526	27513	26500	25488	24475	23462	22449	21436
INTEREST	780	739	699	658	618	577	537	496	456	415	375	334	294	253	213
<b>FINANCE IN FOREIGN CCY</b>															
BORROWING															
REPAYMENT	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013
BALANCE	19244	18231	17218	16205	15193	14180	13167	12154	11141	10128	9116	8103	7090	6077	5064
INTEREST	780	739	699	658	618	577	537	496	456	415	375	334	294	253	213
<b>FINANCE IN LOCAL CCY 1</b>															
BORROWING															
REPAYMENT															
BALANCE	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>	3376	-33211	5529	-46947	7790	10168	-41908	11001	11330	10914	11999	-10609	12663	13031	13086
<b>CASH IN</b>	5916	5522	7241	7308	9421	11759	12226	12510	12799	13090	13366	13666	13990	14297	14312
OPERATING PROFIT	2527	283	2002	-560	1552	3690	1729	2013	2301	2593	2869	3189	3492	3808	3814
DEPRECIATION	3390	5239	5239	7868	7868	7868	10497	10497	10497	10497	10497	10497	10497	10497	10497
BORROWING															
<b>CASH OUT</b>	2541	38732	1712	54255	1631	1590	54134	1509	1449	2176	1388	24495	1307	1266	1226
INVESTMENT	748	36980		52584			52584			748		23148			
INT DURING CONST.															
REPAYMENT	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013
INTEREST	780	739	699	658	618	577	537	496	456	415	375	334	294	253	213

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 4 /PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CUM OPE REVENUE	50705	61804	74223	88749	105388	124364	145926	167771	189905	212330	235052	258073	281398	305030	328974
CUM OPE PROFIT	639	922	2924	2363	3916	7806	9535	11548	13849	16442	19331	22520	26012	29812	33626
CUM NET PROFIT	-17589	-20254	-21843	-25735	-28079	-27848	-31042	-33637	-35628	-37035	-37832	-38708	-38966	-38601	-37907
CUM INVESTMENT	92696	129476	179476	182260	182260	182260	234844	234844	234844	235592	235592	258740	258740	258740	258740
CUM REPAYMENT	1013	2026	3039	4051	5064	6077	7090	8103	9116	10128	11141	12154	13167	14180	15193
CUM INTEREST	6972	8112	9511	10169	10787	11364	11901	12397	12853	13268	13643	13977	14271	14524	14737
CUM NET CASHFLOW	-41744	-74955	-69426	-116373	-108583	-98415	-140322	-129321	-117991	-107077	-95078	-105687	-93204	-80173	-67267

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 1 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
OPERATING PROFIT			-10	-10	-10	-16	-586	-272	79	473	914	-2237	-1235	-115	1135
OPERATING REVENUE							2594	2907	3258	3652	4094	4588	5590	6710	7960
OPERATING EXPENSE			10	10	10	16	3179	3179	3179	3179	3179	6825	6825	6825	6825
WORKING COST			10	10	10	16	1638	1638	1638	1638	1638	3435	3435	3435	3435
MAINTENANCE COST							1490	1490	1490	1490	1490	2784	2784	2784	2784
PERSONNEL COST			10	10	10	16	148	148	148	148	148	651	651	651	651
ELEC COST															
DEPRECIATION							1541	1541	1541	1541	1541	3390	3390	3390	3390
NET PROFIT			-10	-10	-10	-16	-2143	-1783	-1345	-945	-458	-4617	-3513	-2291	-940
TOTAL ASSETS	400	1736	9332	18152	25764	33220	51903	50362	48821	47280	45739	79330	75940	72550	69160
INT. ON TOTAL ASSETS							1557	1511	1465	1418	1372	2380	2278	2176	2075
INVESTMENT	400	2400	8056	8820	7612	7456	20224					36980			
FOREIGN TOTAL	212	964	4540	4276	3888	4572	20020					36608			
LOCAL TOTAL	188	1436	3516	4544	3884	2884	204					372			
ELECTRIFICATION		452	1820	2644	1508	1132									
FOREIGN CURRENCY		208	864	1248	712	532									
LOCAL CURRENCY		244	956	1396	796	600									
SIGNALS & TELECOM		624	2172	332	332	1836									
FOREIGN CURRENCY		324	1776	264	264	1472									
LOCAL CURRENCY			396	68	68	364									
CIVIL WORK	400	260	3604	5844	5772	4488									
FOREIGN CURRENCY	212	132	1908	2744	2832	2568									
LOCAL CURRENCY	188	128	1704	3084	2940	1920									
LAND ACQ & COMP		1064	460												
LOCAL CURRENCY		1064	460												
ROLLING STOCK							20224					36980			
FOREIGN CURRENCY							20020					36608			
LOCAL CURRENCY							204					372			
-SALVAGE VALUE															

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 2 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INT DURING CONST.	15	87	429	868	1309	1832									

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

\*\*\*\*\*

( IRL. RP. ) PAGE 1 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
OPERATING PROFIT	2527	283	2002	-560	1552	3090	1729	2013	2301	2593	2889	3189	3492	3800	3816
OPERATING REVENUE	9351	10900	12619	14526	16639	18977	21561	21846	22134	22426	22721	23021	23325	23632	23944
OPERATING EXPENSE	6825	10617	10617	15086	15086	15086	19832	19832	19832	19832	19832	19832	19832	19832	20132
WORKING COST	3435	5378	5378	7218	7218	7218	9335	9335	9335	9335	9335	9335	9335	9335	9632
MAINTENANCE COST	2764	4079	4079	5919	5919	5919	7759	7759	7759	7759	7759	7759	7759	7759	7759
PERSONNEL COST	451	1299	1299	1299	1299	1299	1576	1576	1576	1576	1576	1576	1576	1576	1673
ELEC COST															
DEPRECIATION	3390	5239	5239	7868	7868	7868	10497	10497	10497	10497	10497	10497	10497	10497	10497
NET PROFIT	531	-2665	-785	-692	-2344	230	-3194	-2595	-1992	-1407	-796	-376	-253	365	694
TOTAL ASSETS	46518	98259	93020	137736	129868	122008	164087	153589	143092	133343	122845	115496	104999	114521	104224
INT. CH TOTAL ASSETS	1996	2948	2791	4132	3896	3660	4923	4608	4293	4000	3685	3465	3252	3035	3122
INVESTMENT	748	34980		52584			52584						23168		
FOREIGN TOTAL	584	36603		52052			52052					534	22578		
LOCAL TOTAL	164	372		532			532					164	643		
ELECTRIFICATION															
FOREIGN CURRENCY															
LOCAL CURRENCY															
SIGNALS & TELECOM	748									748		2924			
FOREIGN CURRENCY	584									584		2483			
LOCAL CURRENCY	164									164		436			
CIVIL WORK															
FOREIGN CURRENCY															
LOCAL CURRENCY															
LAND ACQ & CORP															
LOCAL CURRENCY															
ROLLING STOCK		36980		52584			52584						20224		
FOREIGN CURRENCY		36608		52052			52052						20020		
LOCAL CURRENCY		372		532			532						204		
-SALVAGE VALUE															95750

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

\*\*\*\*\*

( IRL. RP. ) PAGE 2 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INT DURING CONST.															

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 3 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>FINANCE PROGRAM</b>															
<b>FINANCE TOTAL</b>															
BORROWING	415	2487	8485	9688	8921	9288									
REPAYMENT									1909	1909	1909	1909	1909	1909	1909
BALANCE	415	2901	11366	21074	29995	39283	39283	39283	37374	35465	33555	31646	29737	27828	25918
INTEREST							2062	2062	1933	1761	1589	1418	1246	1074	902
<b>FINANCE IN FOREIGN CCY</b>															
BORROWING	227	1051	4969	5144	5117	6404									
REPAYMENT									1909	1909	1909	1909	1909	1909	1909
BALANCE	227	1277	6246	11390	16507	22911	22911	22911	21602	19093	17183	15274	13365	11454	9546
INTEREST							2062	2062	1933	1761	1589	1418	1246	1074	902
<b>FINANCE IN LOCAL CCY 1</b>															
BORROWING	188	1436	3516	4544	3804	2884									
REPAYMENT															
BALANCE	188	1624	5140	9684	13488	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>															
			-10	-10	-10	-16	-21331	-793	-2222	-1657	-1043	-39154	-1900	292	1713
<b>CASH IN</b>															
	415	2487	8475	9676	8911	9272	955	1269	1620	2014	2455	1153	2155	3275	4525
<b>OPERATING PROFIT</b>															
DEPRECIATION			-10	-10	-10	-16	-586	-272	79	473	914	-2237	-1235	-115	1135
BORROWING	415	2487	8485	9688	8921	9288									
<b>CASH OUT</b>															
	415	2407	8485	9688	8921	9288	22206	2062	3642	3671	3499	40307	3155	2943	2811
<b>INVESTMENT</b>															
INT DURING CONST.	400	2400	8056	8829	7612	7456	20224					36980			
REPAYMENT	15	87	429	868	1309	1832									
INTEREST							2062	2062	1933	1761	1589	1418	1246	1074	902

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 4 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>CUM OPE REVENUE</b>															
							2594	5501	8759	12411	16505	21093	26683	33393	41353
<b>CUM OPE PROFIT</b>															
			-10	-19	-29	-45	-631	-903	-824	-351	564	-1673	-2908	-3022	-1888
<b>CUM NET PROFIT</b>															
			-10	-19	-29	-45	-2188	-3971	-5356	-6302	-6759	-11376	-14889	-17180	-18120
<b>CUM INVESTMENT</b>															
	400	2600	10856	19676	27288	34744	54968	54968	54968	54968	54968	91948	91948	91948	91948
<b>CUM REPAYMENT</b>															
								1909	3819	5728	7637	9546	11456	13365	15274
<b>CUM INTEREST</b>															
							2062	4124	6057	7818	9408	10825	12471	13145	14047
<b>CUM NET CASHFLOW</b>															
			-10	-19	-29	-45	-21376	-22169	-24391	-26048	-27891	-66245	-67245	-66953	-65248



\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 3 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>FINANCE PROGRAM</b>															
<b>FINANCE TOTAL</b>															
BORROWING															
REPAYMENT	1909	1909	1909	1909	1909										
BALANCE	24009	22100	20191	18281	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372
INTEREST	730	558	387	215	43										
<b>FINANCE IN FOREIGN CCY</b>															
BORROWING															
REPAYMENT	1909	1909	1909	1909	1909										
BALANCE	7637	5725	3819	1909											
INTEREST	730	558	387	215	43										
<b>FINANCE IN LOCAL CCY 1</b>															
BORROWING															
REPAYMENT															
BALANCE	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372	16372
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>															
	2529	-33926	4945	-47400	7468	11759	-40358	12510	12799	12342	13366	-9462	13990	14297	14312
<b>CASH IN</b>															
OPERATING PROFIT	5916	5522	7241	7308	9421	11759	12226	12510	12799	13090	13366	13686	13990	14297	14312
DEPRECIATION	2527	283	2002	-560	1552	3890	1729	2013	2301	2593	2889	3189	3492	3800	3814
BORROWING	3390	5239	5239	7868	7868	7868	10497	10497	10497	10497	10497	10497	10497	10497	10497
<b>CASH OUT</b>															
INVESTMENT	3388	39448	2296	54708	1952		52584			748		23148			
INT DURING CONST.	748	36960		52504			52584			748		23148			
REPAYMENT	1909	1909	1909	1909	1909										
INTEREST	730	558	387	215	43										

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 4 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CUM OPE REVENUE	50705	61604	74223	88749	105388	124364	145926	167771	189905	212330	235052	258073	281398	305030	328974
CUM OPE PROFIT	639	922	2924	2363	3916	7804	9535	11548	13649	16442	19331	22520	26012	29812	33626
CUM NET PROFIT	-17589	-21254	-21043	-25735	-28079	-27868	-31842	-33637	-35628	-37035	-37832	-38708	-38956	-38601	-37907
CUM INVESTMENT	92696	129676	129676	182260	182260	182260	234844	234844	234844	235592	235592	258740	258740	258740	258740
CUM REPATMENT	15274	17183	19093	21002	22911	22911	22911	22911	22911	22911	22911	22911	22911	22911	22911
CUM INTEREST	14778	15336	15723	15938	15980	15980	15980	15980	15980	15980	15980	15980	15980	15980	15980
CUM NET CASHFLOW	-62711	-96637	-91692	-139692	-131624	-119865	-160223	-147713	-136914	-122572	-109186	-118648	-104658	-90361	-76049

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 1 /PART 1

CASE 2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
OPERATING PROFIT			-10	-10	-10	-16	-586	-272	79	473	916	-2237	-1235	-115	1135
OPERATING REVENUE							2596	2907	3256	3652	4096	4588	5590	6710	7960
OPERATING EXPENSE			10	10	10	16	3179	3179	3179	3179	3179	4825	4825	6825	6825
WORKING COST			10	10	10	16	1638	1638	1638	1638	1638	3435	3435	3435	3435
MAINTENANCE COST							1490	1490	1490	1490	1490	2784	2784	2784	2784
PERSONNEL COST			10	10	10	16	148	148	148	148	148	651	651	651	651
ELEC COST															
DEPRECIATION							1541	1541	1541	1541	1541	3390	3390	3390	3390
NET PROFIT			-10	-10	-10	-16	-2143	-1783	-1385	-945	-458	-4617	-3513	-2291	-948
TOTAL ASSETS	400	1736	9332	18152	25764	33220	51903	50362	48821	47280	45739	79330	75940	72550	69160
INT. ON TOTAL ASSETS							1557	1511	1465	1418	1372	2388	2278	2176	2075
INVESTMENT	400	2400	8056	8820	7612	7456	20224					36980			
FOREIGN TOTAL	212	964	4540	4276	3800	4572	20020					36608			
LOCAL TOTAL	188	1436	3516	4544	3804	2884	204					372			
ELECTRIFICATION		452	1820	2644	1508	1132									
FOREIGN CURRENCY		208	864	1248	712	532									
LOCAL CURRENCY		244	956	1396	796	600									
SIGNALS & TELECOM		624	2172	332	332	1856									
FOREIGN CURRENCY		624	1776	264	264	1472									
LOCAL CURRENCY			396	68	68	364									
CIVIL WORK	400	260	3604	5844	5772	4488									
FOREIGN CURRENCY	212	132	1988	2764	2832	2568									
LOCAL CURRENCY	188	128	1704	3080	2940	1920									
LAND ACQ & COMP		1064	460												
LOCAL CURRENCY		1064	460												
ROLLING STOCK							20224					36980			
FOREIGN CURRENCY							20020					36608			
LOCAL CURRENCY							204					372			
-SALVAGE VALUE															

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 2 /PART 1

CASE 2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INT DURING CONST.	15	47	429	668	1309	1832									

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
OPERATING PROFIT	2527	283	2002	-540	1552	3890	1729	2013	2301	2593	2589	3189	3492	3400	3814
OPERATING REVENUE	9351	10900	12619	14526	16639	18977	21561	21846	22134	22426	22721	23021	23325	23632	23944
OPERATING EXPENSE	6825	10617	10617	15066	15086	15086	19832	19832	19832	19832	19832	19832	19832	19832	20132
WORKING COST	3435	5378	5378	7218	7218	7218	9335	9335	9335	9335	9335	9335	9335	9335	9632
MAINTENANCE COST	2784	4079	4079	5919	5919	5919	7759	7759	7759	7759	7759	7759	7759	7759	7759
PERSONNEL COST	651	1299	1299	1299	1299	1299	1576	1576	1576	1576	1576	1576	1576	1576	1673
ELEC COST															
DEPRECIATION	1390	5239	5239	7668	7668	7668	10497	10497	10497	10497	10497	10497	10497	10497	10497
NET PROFIT	531	-2665	-788	-4692	-2344	230	-3194	-2595	-1992	-1407	-796	-676	-253	365	694
TOTAL ASSETS	66318	98259	93020	237736	129568	122000	164287	151589	143092	133343	122845	135496	124999	114501	104884
INT. ON TOTAL ASSETS	1996	2948	2791	4132	3496	3660	4923	4688	4293	4000	3685	4065	3750	3435	3120
INVESTMENT	748	36988		52584			52584			748		23146			
FOREIGN TOTAL	584	36608		52052			52052			584		22508			
LOCAL TOTAL	164	372		532			532			164		640			
ELECTRIFICATION															
FOREIGN CURRENCY															
LOCAL CURRENCY															
SIGNALS & TELECOM	748									748		2924			
FOREIGN CURRENCY	584									584		2460			
LOCAL CURRENCY	164									164		436			
CIVIL WORK															
FOREIGN CURRENCY															
LOCAL CURRENCY															
LAND ACQ & CONP															
LOCAL CURRENCY															
ROLLING STOCK		36980		52584			52584					20224			
FOREIGN CURRENCY		36608		52052			52052					20020			
LOCAL CURRENCY		372		532			532					204			
-SALVAGE VALUE															95750

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 2 /PART 2

CASE 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INT DURING CONST.															

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 3 / PART 1

CASE 2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>FINANCE PROGRAM</b>															
<b>FINANCE TOTAL</b>															
BORROWING	429	2621	8959	10710	10578	11622			1909	4213	4213	4213	4213	4213	4213
REPAYMENT															
BALANCE	429	3050	12009	22719	33298	44919	44919	44919	43010	38797	34588	30371	26158	21945	17732
INTEREST							4826	4826	4698	4180	3548	2915	2282	1650	1017
<b>FINANCE IN FOREIGN CCY</b>															
BORROWING	227	1051	4969	5144	5117	6404			1909	1909	1909	1909	1909	1909	1909
REPAYMENT															
BALANCE	227	1277	6246	11390	16507	22911	22911	22911	21882	19093	17183	15274	13365	11456	9546
INTEREST							2042	2062	1933	1761	1589	1418	1246	1074	902
<b>FINANCE IN LOCAL CCY 1</b>															
BORROWING	94	718	1758	2272	1902	1442									
REPAYMENT															
BALANCE	94	812	2570	4842	6744	8186	8186	8186	8186	8186	8186	8186	8186	8186	8186
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
BORROWING	109	852	2232	3295	3559	3775				2304	2304	2304	2304	2304	2304
REPAYMENT															
BALANCE	109	961	3193	6488	10047	13822	13822	13822	13822	11518	9215	6911	4607	2304	2304
INTEREST							2764	2764	2764	2419	1958	1497	1037	574	115
<b>NET CASHFLOW</b>	<b>15</b>	<b>134</b>	<b>465</b>	<b>1013</b>	<b>1648</b>	<b>2317</b>	<b>-24095</b>	<b>-3558</b>	<b>-4987</b>	<b>-6379</b>	<b>-5305</b>	<b>-42955</b>	<b>-4348</b>	<b>-2568</b>	<b>-706</b>
<b>CASH IN</b>	<b>429</b>	<b>2621</b>	<b>8949</b>	<b>10701</b>	<b>10569</b>	<b>11606</b>	<b>955</b>	<b>1269</b>	<b>1620</b>	<b>2014</b>	<b>2455</b>	<b>1153</b>	<b>2155</b>	<b>3275</b>	<b>4525</b>
<b>OPERATING PROFIT</b>															
<b>DEPRECIATION</b>															
<b>BORROWING</b>	<b>429</b>	<b>2621</b>	<b>8959</b>	<b>10710</b>	<b>10578</b>	<b>11622</b>									
<b>CASH OUT</b>	<b>415</b>	<b>2487</b>	<b>8485</b>	<b>9688</b>	<b>8921</b>	<b>9288</b>	<b>25050</b>	<b>4826</b>	<b>6607</b>	<b>8393</b>	<b>7761</b>	<b>44108</b>	<b>6495</b>	<b>5063</b>	<b>5230</b>
<b>INVESTMENT</b>	<b>400</b>	<b>2400</b>	<b>8056</b>	<b>8820</b>	<b>7612</b>	<b>7456</b>	<b>20224</b>					<b>36980</b>			
<b>INT DURING CONST.</b>	<b>15</b>	<b>87</b>	<b>429</b>	<b>868</b>	<b>1309</b>	<b>1832</b>									
<b>REPAYMENT</b>															
<b>INTEREST</b>							<b>4826</b>	<b>4826</b>	<b>4698</b>	<b>4180</b>	<b>3548</b>	<b>2915</b>	<b>2282</b>	<b>1650</b>	<b>1017</b>

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 4 / PART 1

CASE 2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>CUM OPE REVENUE</b>							2594	5501	8759	12411	16505	21093	26483	33391	41353
<b>CUM OPE PROFIT</b>							-45	-631	-903	-824	-351	564	-1673	-2908	-3822
<b>CUM NET PROFIT</b>							-45	-2188	-3971	-5356	-6302	-6759	-11376	-14889	-18120
<b>CUM INVESTMENT</b>	400	2800	10856	19676	27288	34744	54968	54968	54968	54968	54968	54968	54968	54968	54968
<b>CUM REPAYMENT</b>															
<b>CUM INTEREST</b>															
<b>CUM NET CASHFLOW</b>	<b>15</b>	<b>149</b>	<b>613</b>	<b>1626</b>	<b>3274</b>	<b>5591</b>	<b>-18584</b>	<b>-22862</b>	<b>-27048</b>	<b>-33428</b>	<b>-38733</b>	<b>-41688</b>	<b>-46028</b>	<b>-48615</b>	<b>-49321</b>

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 3 /PART 2

CASE 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>FINANCE PROGRAM</b>															
<b>FINANCE TOTAL</b>															
BORROWING	1909	1909	1909	1909	1909										
REPAYMENT	15823	13914	12005	10095	8186	8186	8186	8186	8186	8186	8186	8186	8186	8186	8186
BALANCE	730	558	387	215	43										
INTEREST															
<b>FINANCE IN FOREIGN CNY</b>															
BORROWING	1909	1909	1909	1909	1909										
REPAYMENT	7637	5723	3819	1909											
BALANCE	730	558	387	215	43										
INTEREST															
<b>FINANCE IN LOCAL CNY 1</b>															
BORROWING															
REPAYMENT	8186	8186	8186	8186	8186	8186	8186	8186	8186	8186	8186	8186	8186	8186	8186
BALANCE															
INTEREST															
<b>FINANCE IN LOCAL CNY 2</b>															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>	2529	-33926	4945	-47400	7468	11759	-40358	12510	12799	12342	13386	-9462	13990	14297	14312
<b>CASH IN</b>	5916	5522	7241	7308	9421	11759	12226	12510	12799	13997	13386	13606	13990	14297	14312
OPERATING PROFIT	2527	283	2002	-560	1552	3890	1729	2913	2301	2593	2509	3189	3492	3833	3814
DEPRECIATION	3390	5239	5239	7868	7868	7868	10497	10497	10497	10497	10497	10497	10497	10497	10497
BORROWING															
<b>CASH OUT</b>	3383	39448	2296	54798	1952		52504			748		23148			
INVESTMENT	748	36980		52504			52504			748		23148			
INT DURING CONST.															
REPAYMENT	1909	1909	1909	1909	1909										
INTEREST	730	558	387	215	43										

\*\* FINANCIAL ANALYSIS FOR GRADE SEPARATED CROSSING IN MANGGARAI STATION \*\*

( MIL. RP. ) PAGE 4 /PART 2

CASE 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CUM OPE REVENUE	50795	61604	74223	88749	105388	124364	145926	167771	189905	212330	235052	258073	281398	305930	328974
CUM OPE PROFIT	439	922	2924	2363	3916	7886	9535	11548	13849	16442	19331	22529	26012	29812	33626
CUM NET PROFIT	-17509	-20254	-21093	-25735	-28079	-27848	-31042	-33637	-35623	-37035	-37832	-38708	-38966	-38601	-37907
CUM INVESTMENT	42696	129676	129676	182260	182260	182260	234844	234844	234844	235592	235592	253740	253740	258740	253740
CUM REPAYMENT	29094	31005	32915	34824	36733	36733	36733	36733	36733	36733	36733	36733	36733	36733	36733
CUM INTEREST	30673	31231	31618	31833	31876	31876	31876	31876	31876	31876	31876	31876	31876	31876	31876
CUM NET CASHFLOW	-86792	-120718	-115773	-163173	-155705	-143947	-104305	-171796	-158996	-146653	-133267	-142729	-128739	-114442	-100131

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 1 / PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	2262	2973	6038	9294	49419	9643	11835	13557	24124		525	20401	164	315	1019
WITH	2262	2973	6038	9294	49419	9643	11835	13557	24124		525	20401	164	315	1019
ELECTRIFICATION		686	2927	5501	2656	564	2808	2863	3255						
SIGNALS & TELECOM		432	1165	1868	1868	252	671	1109	1109				164		704
CIVIL WORK	1575	1166	1224	1239	742	6699	7961	9545	6413						
LAND ACQ & CONP			33			1525									
ROLLING STOCKS	687	687	687	687	40154	402			13246		525	20401		315	315
-SALVAGE VALUE															
MAINT/OPE COST DIFF						-6888	-7707	-9035	-10116	-9541	-11590	-13030	-17467	-22439	-27624
WITH						3488	3321	3338	3802	6076	5951	6682	7080	7108	7126
RAIL															
ELECTRIC FAC						229	229	229	229	421	421	421	421	421	421
SIGNALS & TELECOM						183	183	183	183	297	297	297	297	297	297
CIVIL WORK						230	230	230	230	1250	1250	1250	1250	1250	1250
ROLLING STOCKS						1599	1623	1623	2086	2086	2117	2843	2843	2843	2860
PSHL COST						301	282	299	299	407	407	413	471	481	481
ELEC COST						944	775	775	775	1614	1454	1454	1797	1797	1797
WITHOUT						20376	11828	12373	13920	15617	17540	19712	24547	29547	34750
ROAD VEHICLE															
FUEL COST						4249	4515	5065	5495	6389	7173	8059	9390	10740	12186
ENGINE OIL						214	227	255	287	322	361	406	487	569	654
TYRE WEAR						70	74	83	94	105	118	133	164	197	232
MAINTENANCE COST						1045	1132	1245	1426	1595	1790	2011	2282	2633	3107
MAINTENANCE LABOUR						10	11	12	13	15	17	19	26	33	40
VEHICLE COST						4303	4574	5136	5779	6490	7296	8200	10541	12996	15550
PSHL COST						466	496	556	625	701	786	884	1130	1399	1671
TOTAL BENEFIT						10085	10674	11946	13403	15001	16831	18838	19782	20766	21689
PAS TIME SAVING						10085	10674	11946	13403	15001	16831	18838	19782	20766	21689
NET FLOW	-2262	-2973	-6038	-9294	-49419	7330	6546	7425	-603	24543	27096	12467	37085	42909	48294
ERRR	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 2 / PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP						4249	4515	5065	5495	6389	7173	8059	9390	10740	12186
*DIESEL SAV KL						6436	6975	10057	11316	12682	14215	15992	18547	21075	23428
*GASOLINE SAV KL						7977	8467	9509	10683	11997	13466	15136	17699	20344	23027
EMPLOYMENT GENE PERSONS	339	444	948	1569	1166	2607	2363	3492	3040	362	423	629	416	481	502
WORKERS DURING CONST.	339	444	948	1569	1166	2336	2110	3223	2771		61	262		56	77
PJKA EMPLOYEE						271	253	269	269	362	362	367	416	425	425
TOTAL COST SAV BENE	1065083														
TOTAL PAS TIME SAVING	571825														
TOTAL FUEL SAVE	389692														
TOTAL WORKERS	17375														

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

BASE CASE		( MIL. RP. ) PAGE 1 /PART 2													
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	13928	1654	22082	436			13534		704		48267	402		13248	-96648
WITH	13928	1654	22082	436			13534		704		48267	402		13248	-96648
ELECTRIFICATION SIGNALS & TELECOM CIVIL WORK LAND ACQ & COMP ROLLING STOCKS -SALVAGE VALUE		975	2206	436			286		704		3504 1458				576
	13928	680	19876				13248				43305	402		13248	97224
MAINT/OPE COST DIFF	-32544	-37866	-43050	-48575	-54833	-61398	-67788	-88683	-95877	-70992	-72221	-73517	-74634	-76119	-77327
WITH	7630	7973	8683	9252	9252	9252	9716	10043	10043	10049	10049	10049	10049	10049	10049
RAIL															
ELECTRIC FAC	421	421	421	421	421	421	421	421	421	421	421	421	421	421	421
SIGNALS & TELECOM	297	297	297	398	398	398	398	398	398	398	398	398	398	398	398
CIVIL WORK	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250
ROLLING STOCKS	3384	3424	4119	4119	4119	4119	4583	4583	4583	4583	4583	4583	4583	4583	4583
PSNL COST	481	516	530	590	590	590	590	637	637	643	643	643	643	643	643
ELEC COST	1797	2065	2065	2474	2474	2474	2474	2754	2754	2754	2754	2754	2754	2754	2754
WITHOUT	40173	45839	51733	57827	64085	70650	77503	84726	79920	81041	82269	83566	84882	86168	87376
ROAD VEHICLE															
FUEL COST	13503	14932	16386	17850	19323	20825	22353	22695	23027	23350	23691	24053	24420	24777	25125
ENGINE OIL	741	832	926	1021	1117	1217	1320	1341	1360	1379	1398	1421	1443	1464	1484
TYRE WEAR	811	1017	1240	1477	1730	2003	2303	2341	2374	2407	2442	2482	2524	2560	2595
MAINTENANCE COST	4878	5696	6556	7450	8359	9338	10380	10542	10691	10806	10958	11129	11303	11482	11565
MAINTENANCE LABOUR	48	86	64	73	83	93	103	105	106	108	109	111	113	114	116
VEHICLE COST	18239	21047	23984	27058	30219	33591	37083	37673	38280	38855	39480	40107	40743	41398	42019
PSNL COST	1954	2258	2577	2898	3234	3582	3940	4028	4081	4136	4191	4263	4336	4393	4452
TOTAL BENEFIT	22655	23552	24438	25352	26190	27071	27831	28156	28557	28890	29302	29644	29990	30418	30773
PAS TIME SAVING	22655	23552	24438	25352	26190	27071	27831	28156	28557	28890	29302	29644	29990	30418	30773
NET FLOW	41271	59763	45399	73491	81023	88449	82085	96839	97730	99882	53256	102759	104824	93289	204748
EIRR	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

BASE CASE		( MIL. RP. ) PAGE 2 /PART 2													
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	13503	14932	16386	17850	19323	20825	22353	22695	23027	23350	23691	24053	24420	24777	25125
%DIESEL SAV KL	26216	28939	31707	34392	37046	39810	42691	43412	43965	44551	45139	45901	46675	47291	47900
%GASOLINE SAV KL	25784	28553	31367	34279	37212	40224	43204	43815	44501	45162	45869	46517	47173	47912	48622
EMPLOYMENT BENE PERSONS	655	590	773	527	515	515	660	554	574	559	1499	628	559	692	579
WORKERS DURING CONST.	230	137	307	12			145		20		940	69		133	20
PKKA EMPLOYEE	425	453	466	515	515	515	515	554	554	559	559	559	559	559	559
TOTAL COST SAV BENE															
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 1 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	2714	3567	7245	11153	54503	11571	14202	16266	28949		630	24481	197	378	1223
WITH	2714	3567	7245	11153	54503	11571	14202	16266	28949		630	24481	197	378	1223
ELECTRIFICATION		825	3513	6601	3187	676	3360	3436	3786						
SIGNALS & TELECOM		518	1398	2241	2241	302	806	1331	1331				197		644
CIVIL WORK	1890	1399	1469	1486	890	8279	9553	11502	7936						
LAND ACQ & COMP			48			1830									
ROLLING STOCKS															
-SALVAGE VALUE	824	824	824	824	48185	483	483		15898		630	24481		378	378
MAINT/OPE COST DIFF						-7513	-8395	-9862	-11013	-10348	-12590	-14109	-19150	-24769	-30585
WITH						3937	3779	3791	4347	6887	6768	7645	8042	8074	8096
RAIL															
ELECTRIC FAC						275	275	275	275	505	505	505	505	505	505
SIGNALS & TELECOM						219	219	219	219	357	357	357	357	357	357
CIVIL WORK						276	276	276	276	1500	1500	1500	1500	1500	1500
ROLLING STOCKS						1919	1947	1947	2504	2504	2541	3412	3412	3434	3456
PSNL COST						303	282	299	299	407	407	413	471	481	481
ELEC COST						944	775	775	775	1614	1458	1458	1797	1797	1797
WITHOUT						11450	12149	13453	15341	17234	19357	21754	27192	32842	36681
ROAD VEHICLE															
FUEL COST						4249	4515	5065	5695	6389	7173	8059	9390	10740	12106
ENGINE OIL						214	227	255	287	322	361	406	487	569	654
TYRE WEAR						70	74	83	94	105	118	133	164	196	228
MAINTENANCE COST						1278	1350	1519	1712	1914	2148	2413	2818	3346	3928
MAINTENANCE LABOUR						10	11	12	13	15	17	19	24	33	40
VEHICLE COST						5163	5488	6163	6935	7788	8755	9840	12650	15595	18660
PSNL COST						466	496	556	625	701	786	884	1038	1209	1411
TOTAL BENEFIT						10085	10674	11946	13403	15001	16831	18838	19782	20766	21689
PAS TIME SAVING						10085	10674	11946	13403	15001	16831	18838	19782	20766	21689
NET FLOW	-2714	-3567	-7245	-11153	-54503	6027	4867	5541	-4533	25349	28791	8466	38735	45156	51052
EIRR	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 2 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP						4249	4515	5065	5695	6389	7173	8059	9390	10740	12106
*DIESEL SAV KL						8436	8975	10057	11318	12642	14215	15992	18547	21875	23428
*GASOLINE SAV KL						7977	8467	9509	10683	11997	13486	15136	17699	20344	23027
EMPLOYMENT GENR PERSONS	339	444	948	1569	1166	2607	2363	3492	3040	362	423	629	416	481	582
WORKERS DURING CONST.	339	444	948	1569	1166	2336	2110	3223	2771		61	262		54	77
PJKA EMPLOYEE						271	253	269	269	362	362	367	416	425	425
TOTAL COST SAV BENE	1189094														
TOTAL PAS TIME SAVING	571825														
TOTAL FUEL SAVE	389692														
TOTAL WORKERS	17375														



\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	16713	1985	26498	524			16241		844		57920	483		15898	-115978
WITH	16713	1985	26498	524			16241		844		57920	483		15898	-115978
ELECTRIFICATION SIGNALS & TELECOM CIVIL WORK LAND ACQ & CORP ROLLING STOCKS -SALVAGE VALUE		1170	2647	524			343		644		4205 1750				692
MAINT/OPE COST DIFF	-36097	-42136	-47941	-54239	-61315	-68767	-75950	-76996	-78341	-79594	-80978	-82434	-83912	-85361	-86717
WITH	6700	9051	9908	10489	10489	10489	11046	11373	11373	11379	11379	11379	11379	11379	11379
RAIL															
ELECTRIC FAC	505	505	505	505	505	505	505	505	505	505	505	505	505	505	505
SIGNALS & TELECOM	357	357	357	478	478	478	478	478	478	478	478	478	478	478	478
CIVIL WORK	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
ROLLING STOCKS	4061	4103	4943	4943	4943	4943	5499	5499	5499	5499	5499	5499	5499	5499	5499
PSNL COST	481	516	530	590	590	590	590	637	637	643	643	643	643	643	643
ELEC COST	1797	2065	2065	2474	2474	2474	2474	2754	2754	2754	2754	2754	2754	2754	2754
WITHOUT	44797	51188	57041	64729	71805	79236	86996	84369	89714	90973	92357	93813	95291	96740	98096
ROAD VEHICLE															
FUEL COST	13503	14932	16386	17850	19323	20825	22353	22695	23027	23350	23691	24053	24420	24777	25125
ENGINE OIL	741	832	926	1021	1117	1217	1320	1361	1360	1379	1398	1421	1443	1464	1484
TYRE WEAR	811	1017	1240	1477	1730	2003	2303	2361	2374	2407	2442	2482	2524	2560	2595
MAINTENANCE COST	5853	6835	7867	8940	10031	11206	12457	12651	12829	12967	13150	13355	13563	13750	13902
MAINTENANCE LABOUR	48	56	64	73	83	93	103	105	106	108	109	111	113	114	116
VEHICLE COST	21486	25257	28781	32470	36287	40310	44500	45208	45936	46626	47376	48128	48892	49677	50422
PSNL COST	1954	2254	2577	2898	3234	3582	3960	4028	4081	4136	4191	4243	4306	4363	4422
TOTAL BENEFIT	22655	23552	24430	25352	26190	27071	27831	28156	28557	28890	29302	29644	29990	30416	30773
PAS TIME SAVING	22655	23552	24430	25352	26190	27071	27831	28156	28557	28890	29302	29644	29990	30416	30773
NET FLOW	42038	63703	45873	79068	87505	95818	87540	105151	106053	108464	52360	111595	113903	99881	233468
EIRR	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 2 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	13503	14932	16386	17850	19323	20825	22353	22695	23027	23350	23691	24053	24420	24777	25125
*DIESEL SAV KL	26216	28939	31707	34392	37086	39810	42691	43412	43985	44551	45139	45901	46675	47291	47900
*GASOLINE SAV KL	25784	28553	31367	34279	37212	40224	43204	43815	44501	45162	45869	46517	47173	47912	48622
EMPLOYMENT GENE PERSONS	655	590	773	527	515	515	660	554	574	559	1499	628	559	692	579
WORKERS DURING CONST.	230	137	307	12			145		20		940	69		133	20
PJKA EMPLOYEE	425	453	466	515	515	515	515	554	554	559	559	559	559	559	559
TOTAL COST SAV BENE															
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 1 /PART 1

CASE 2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	2262	2973	6038	9294	45419	9643	11835	13557	24124		525	20401	164	315	1019
WITH	2262	2973	6038	9294	45419	9643	11835	13557	24124		525	20401	164	315	1019
ELECTRIFICATION		688	2927	5501	2656	564	2800	2863	3155						
SIGNALS & TELECOM		432	1165	1868	1868	252	571	1109	1109				164		704
CIVIL WORK	1575	1166	1224	1239	742	6899	7961	9585	6613						
LAND ACQ & COMP			33			1525									
ROLLING STOCKS	687	687	687	687	40154	402	402		13248		525	20401		315	315
-SALVAGE VALUE															
MAINT/OPR COST DIFF						-4033	-4673	-5631	-6288	-5245	-6764	-7607	-10938	-14788	-18783
WITH						3488	3321	3338	3802	4976	5951	6682	7880	7108	7126
RAIL															
ELECTRIC FAC						229	229	229	229	421	421	421	421	421	421
SIGNALS & TELECOM						183	183	183	183	297	297	297	297	297	297
CIVIL WORK						230	230	230	230	1250	1250	1250	1250	1250	1250
ROLLING STOCKS						1599	1623	1623	2086	2086	2117	2843	2843	2862	2880
PSHL COST						303	282	299	299	407	407	413	471	481	481
ELEC COST						944	775	775	775	1614	1456	1458	1797	1797	1797
WITHOUT						7521	7994	8969	10090	11321	12715	14289	18018	21894	25909
ROAD VEHICLE															
FUEL COST						3239	3442	3862	4342	4872	5470	6145	7499	8894	10328
ENGINE OIL						159	169	190	214	239	269	302	374	448	524
TYRE WEAR						41	44	49	55	62	70	79	134	194	257
MAINTENANCE COST						737	783	876	987	1104	1238	1391	1818	2262	2719
MAINTENANCE LABOUR						7	7	8	9	10	11	13	17	21	26
VEHICLE COST						3012	3202	3595	4045	4543	5107	5740	7379	9097	10845
PSHL COST						326	347	389	438	491	550	619	797	979	1170
TOTAL BENEFIT						7059	7472	8362	9382	10501	11782	13187	13847	14536	15182
PAS TIME SAVING						7059	7472	8362	9382	10501	11782	13187	13847	14536	15182
NET FLOW	-2262	-2973	-6038	-9294	-45419	1458	318	437	-8454	15746	18021	393	24622	29009	32947
EIRR	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 2 /PART 1

CASE 2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP						3239	3442	3862	4342	4872	5470	6145	7499	8894	10328
*DIESEL SAV KL						6463	6876	7705	8671	9716	10890	12252	14930	17619	20422
*GASOLINE SAV KL						6059	6431	7223	8115	9114	10246	11500	14050	16711	19449
EMPLOYMENT GENE PERSONS	339	444	948	1569	1166	2607	2363	3492	3040	362	423	619	416	481	502
WORKERS DURING CONST.	339	444	948	1569	1166	2336	2110	3223	2771	61	61	262	56	56	77
PUKA EMPLOYEE						271	253	269	269	362	362	367	416	425	425
TOTAL COST SAV BENE	758949														
TOTAL PAS TIME SAVING	400277														
TOTAL FUEL SAVE	361048														
TOTAL WORKERS	17375														

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	13928	1654	22082	436			13534		704		48267	402		13248	-96648
WITH	13928	1654	22082	436			13534		704		48267	402		13248	-96648
ELECTRIFICATION SIGNALS & TELECOM CIVIL WORK LAND ACQ & COMP ROLLING STOCKS -SALVAGE VALUE	13928	680	19676				13248				43305	402		13248	97224
MAINT/OPE COST DIFF	-22483	-26537	-30407	-34580	-39460	-44580	-49466	-50073	-50986	-51642	-52781	-53772	-54779	-55762	-56690
WITH	7630	7973	8683	9252	9252	9252	9716	10043	10043	10049	10049	10049	10049	10049	10049
RAIL															
ELECTRIC FAC	421	421	421	421	421	421	421	421	421	421	421	421	421	421	421
SIGNALS & TELECOM	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297
CIVIL WORK	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250
ROLLING STOCKS	3384	3424	4119	4119	4119	4119	4583	4583	4583	4583	4583	4583	4583	4583	4583
PSNL COST	481	516	530	590	590	590	590	637	637	663	663	663	663	663	663
ELEC COST	1797	2065	2065	2474	2474	2474	2474	2754	2754	2754	2754	2754	2754	2754	2754
WITHOUT	30113	34510	39090	43832	48711	53831	59182	60117	61029	61890	62830	63821	64827	65810	66738
ROAD VEHICLE															
FUEL COST	11813	13356	14948	16580	18249	19978	21768	22105	22431	22748	23084	23441	23803	24154	24495
ENGINE OIL	604	687	774	862	952	1046	1145	1244	1348	1454	1561	1671	1782	1894	2008
TYRE WEAR	326	400	479	563	652	747	850	965	1089	1217	1349	1485	1624	1766	1912
MAINTENANCE COST	3204	3717	4254	4812	5376	5981	6624	7277	7922	8569	9219	9871	10525	11181	11839
MAINTENANCE LABOUR	30	35	41	46	52	58	64	71	78	86	94	102	110	119	128
VEHICLE COST	12767	14733	16789	18941	21167	23516	25958	28371	30746	33184	35684	38244	40864	43544	46284
PSNL COST	1368	1581	1804	2029	2264	2508	2772	3028	3285	3544	3804	4064	4324	4584	4844
TOTAL BENEFIT	15858	16486	17101	17746	18333	18950	19482	19709	19990	20223	20511	20751	20993	21292	21541
PAS TIME SAVING	15858	16486	17101	17746	18333	18950	19482	19709	19990	20223	20511	20751	20993	21292	21541
NET FLOW	24414	41368	25427	51890	57792	63529	55414	69782	70272	72065	25025	74121	75772	63806	174879
EIRR	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 2 /PART 2

CASE 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	11813	13356	14948	16580	18249	19978	21768	22105	22431	22748	23084	23441	23803	24154	24495
%DIESEL SAV KL	23290	26335	29486	32618	35824	39124	42656	43377	43949	44516	45103	45865	46639	47254	47864
%GASOLINE SAV KL	22299	25208	28207	31347	34557	37901	41279	41876	42542	43182	43871	44502	45142	45862	46530
EMPLOYMENT GENE PERSONS WORKERS DURING CONST.	655	590	773	527	515	515	660	554	574	559	1499	628	559	692	579
PJKA EMPLOYEE	230	137	307	12	12	12	145	145	20	20	960	69	69	133	20
TOTAL COST SAV BENE	425	453	466	515	515	515	515	554	554	559	559	559	559	559	559
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 1 /PART 1

CASE 3

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	2714	3567	7245	11153	54503	11571	14202	16268	20949		630	24481	197	378	1223
WITH	2714	3567	7245	11153	54503	11571	14202	16268	20949		630	24481	197	378	1223
ELECTRIFICATION		825	3513	6601	3187	676	3360	3436	3786						
SIGNALS & TELECOM		518	1398	2241	2241	302	806	1331	1331				197		844
CIVIL WORK	1690	1399	1469	1466	890	8279	9553	11502	7936						
LAND ACQ & COMP			40			1630									
ROLLING STOCKS															
-SALVAGE VALUE	824	824	824	824	48185	483	483		15898		630	24481		378	378
MAINT/OPE COST DIFF						-4335	-5017	-4072	-6749	-5563	-7216	-8071	-11816	-16094	-20534
WITH						3937	3774	3791	4347	6887	4768	7645	8042	8074	8096
RAIL															
ELECTRIC FAC						275	275	275	275	505	505	505	505	505	505
SIGNALS & TELECOM						219	219	219	219	357	357	357	357	357	357
CIVIL WORK						276	276	276	276	1500	1500	1500	1500	1500	1500
ROLLING STOCKS						1919	1947	1947	2504	2504	2541	3412	3412	3436	3456
PSNL COST						303	282	299	299	407	407	413	471	481	481
ELEC COST						944	775	775	775	1614	1458	1458	1797	1797	1797
WITHOUT						8271	8791	9863	11697	12450	13964	15715	19458	24168	28630
ROAD VEHICLE															
FUEL COST						3239	3442	3862	4342	4872	5470	6145	7499	8894	10328
ENGINE OIL						159	169	190	214	239	269	302	374	448	524
TYRE WEAR						41	44	49	55	62	70	79	134	194	257
MAINTENANCE COST						884	939	1051	1184	1324	1486	1670	2182	2715	3263
MAINTENANCE LABOUR						7	7	8	9	10	11	13	17	21	26
VEHICLE COST						3614	3842	4314	4855	5451	6128	6888	8055	10917	13062
PSNL COST						326	347	389	430	491	550	619	797	979	1170
TOTAL BENEFIT						7059	7472	8362	9382	10501	11782	13187	13687	14536	15182
PAS TIME SAVING						7059	7472	8362	9382	10501	11782	13187	13687	14536	15182
NET FLOW	-2714	-3567	-7245	-11153	-54503	-177	-1713	-1833	-12818	16064	18368	-3224	25466	30252	34494
EIRR	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 2 /PART 1

CASE 3

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP						3239	3442	3862	4342	4872	5470	6145	7499	8894	10328
*DIESEL SAV KL						6443	6876	7705	8671	9716	10890	12252	14930	17639	20422
*GASOLINE SAV KL						6059	6431	7223	8115	9114	10246	11500	14050	16711	19449
EMPLOYMENT GONE PERSONS	339	444	948	1549	1166	2607	2363	3492	3040	362	423	429	416	461	502
WORKERS DURING CONST.	339	444	948	1549	1166	2336	2110	3223	2771		61	262		56	77
PJKA EMPLOYEE						271	253	269	269	362	362	367	416	425	425
TOTAL COST SAV BENE	836072														
TOTAL PAS TIME SAVING	400277														
TOTAL FUEL SAVE	361048														
TOTAL WORKERS	17375														

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

\*\*\*\*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	16713	1985	26498	524			16241		844		57920	483		15898	-115978
WITH	16713	1985	26498	524			16241		844		57920	483		15898	-115978
ELECTRIFICATION SIGNALS & TELECOM CIVIL WORK LAND ACQ & COMP ROLLING STOCKS -SALVAGE VALUE		1170	2647	524			343		844		4205 1750				692
	16713	816	23851				15898				51966	483		15898	116669
MAINT/OPE COST DIFF	-24607	-29149	-33399	-38093	-43531	-49241	-54652	-55363	-56379	-57331	-58377	-59478	-60595	-61690	-62721
WITH	8700	9051	9900	10489	10489	10489	11046	11373	11373	11379	11379	11379	11379	11379	11379
RAIL															
ELECTRIC FAC	505	505	505	505	505	505	505	505	505	505	505	505	505	505	505
SIGNALS & TELECOM	357	357	357	478	478	478	478	478	478	478	478	478	478	478	478
CIVIL WORK	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
ROLLING STOCKS	4061	4108	4943	4943	4943	4943	5499	5499	5499	5499	5499	5499	5499	5499	5499
PSNL COST	481	516	530	590	590	590	590	637	637	643	643	643	643	643	643
ELEC COST	1797	2065	2065	2474	2474	2474	2474	2754	2754	2754	2754	2754	2754	2754	2754
WITHOUT	33307	38200	43299	48583	54020	59730	65498	66736	67753	68709	69756	70856	71974	73069	74100
ROAD VEHICLE															
FUEL COST	11813	13356	14948	16580	18249	19978	21768	22105	22431	22748	23084	23441	23803	24154	24495
ENGINE OIL	604	687	774	862	952	1046	1145	1164	1180	1196	1213	1233	1252	1270	1288
TYRE WEAR	316	400	479	563	652	747	850	865	877	889	902	917	932	945	954
MAINTENANCE COST	3845	4461	5107	5774	6451	7178	7948	8073	8167	8276	8392	8524	8657	8779	8875
MAINTENANCE LABOUR	30	35	41	46	52	58	64	65	66	67	68	69	70	71	72
VEHICLE COST	15320	17680	20147	22729	25401	28217	31150	31644	32153	32638	33163	33690	34225	34774	35296
PSNL COST	1368	1581	1804	2029	2264	2508	2772	2820	2857	2895	2934	2984	3035	3075	3117
TOTAL BENEFIT	15858	16486	17101	17746	18333	18950	19482	19709	19990	20223	20511	20751	20993	21292	21541
PAS TIME SAVING	15858	16486	17101	17746	18333	18950	19482	19709	19990	20223	20511	20751	20993	21292	21541
NET FLOW	23752	43649	24002	55116	61864	68191	57893	75072	75525	77554	20968	79744	81589	67085	200240
EIRR	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

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( MIL. RP. ) PAGE 2 /PART 2

CASE 3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	11813	13356	14948	16580	18249	19978	21768	22105	22431	22748	23084	23441	23803	24154	24495
*DIESEL SAV KL	23290	24318	29484	32618	35824	39124	42656	43377	43949	44816	45103	45865	46639	47254	47864
*GASOLINE SAV KL	22299	25208	28207	31347	34557	37901	41279	41874	42542	43162	43871	44502	45142	45862	46550
EMPLOYMENT GONE PERSONS	655	590	773	527	515	515	660	554	574	559	1499	628	559	692	579
WORKERS DURING CONST.	230	137	307	12			145		20		940	69		133	20
PJKA EMPLOYEE	425	453	466	515	515	515	515	554	554	559	559	559	559	559	559
TOTAL COST SAV BENE															
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 1 / PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
OPERATING PROFIT						-2795	-2449	-2036	-2680	-5025	-4325	-5403	-5289	-4783	-4222
OPERATING REVENUE						3356	3557	3987	4469	5009	5614	6293	6843	7355	7952
OPERATING EXPENSE						6151	6006	6023	7149	10036	9939	11695	12093	12136	12173
WORKING COST						3541	3375	3392	3856	6187	6064	6798	7195	7224	7243
MAINTENANCE COST						2293	2318	2318	2782	4165	4198	4927	4927	4946	4965
PERSONNEL COST						303	282	299	299	407	407	413	471	481	481
ELEC COST						946	775	775	775	1616	1458	1458	1797	1797	1797
DEPRECIATION						2610	2631	2631	3293	3847	3876	4898	4898	4914	4930
NET PROFIT						-5004	-4957	-4890	-6178	-8407	-7608	-9151	-8896	-8252	-7575
TOTAL ASSETS	1624	3996	9668	18864	24468	73622	83595	95136	116578	132731	169419	124962	120228	115642	111772
INT. ON TOTAL ASSETS						2209	2508	2854	3497	3382	3283	3749	3607	3469	3353
INVESTMENT	2364	3112	6456	9936	45776	10652	12604	14172	24736		564	20440	164	328	1060
FOREIGN TOTAL	1540	2032	3736	5688	42696	4972	7372	8464	19492		344	20020	164	220	816
LOCAL TOTAL	824	1080	2720	4248	3080	5680	5232	5708	5244		220	420		108	244
ELECTRIFICATION		732	3144	5876	2832	600	2988	3056	3380						
FOREIGN CURRENCY		396	1656	3132	1480	288	1500	1532	1594						
LOCAL CURRENCY		336	1488	2744	1352	312	1488	1524	1876						
SIGNALS & TELECOM		432	1232	1996	1996	252	692	1152	1152				164		732
FOREIGN CURRENCY		432	920	1392	1392	252	584	924	924				164		596
LOCAL CURRENCY			312	604	604		108	228	228						136
CIVIL WORK	1624	1208	1296	1324	776	7360	8504	9964	6956						
FOREIGN CURRENCY	1088	752	708	712	192	4152	5008	6808	3948						
LOCAL CURRENCY	536	456	588	612	584	3208	3496	3156	3008						
LAND ACQ & COMP			44			2020									
LOCAL CURRENCY			44			2020									
ROLLING STOCK	740	740	740	740	40172	420	420		13248		564	20440		328	328
FOREIGN CURRENCY	452	452	452	452	39632	280	280		13116		344	20020		220	220
LOCAL CURRENCY	288	288	288	288	540	140	140		132		220	420		108	108
-SALVAGE VALUE															

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 2 / PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INT DURING CONST.	47	125	264	485	1852										

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

\*\*\*\*\*

( MIL. RP. ) PAGE 1 /PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
OPERATING PROFIT	-4781	-4466	-5416	-5231	-4352	-3401	-3500	-3667	-3464	-3283	-3095	-2905	-2711	-2516	-2317	
OPERATING REVENUE	8597	9293	10046	10860	11740	12690	13717	13898	14082	14267	14455	14646	14839	15035	15233	
OPERATING EXPENSE	13378	13759	15463	16092	16092	16092	17218	17545	17545	17551	17551	17551	17551	17551	17551	
WORKING COST	7749	8095	8804	9377	9377	9377	9840	10168	10168	10173	10173	10173	10173	10173	10173	
MAINTENANCE COST	5471	5513	6209	6313	6313	6313	6777	6777	6777	6777	6777	6777	6777	6777	6777	
PERSONNEL COST	481	516	530	590	590	590	590	637	637	643	643	643	643	643	643	
ELEC COST	1797	2065	2065	2474	2474	2474	2474	2754	2754	2754	2754	2754	2754	2754	2754	
DEPRECIATION	5629	5665	6659	6715	6715	6715	7377	7377	7377	7377	7377	7377	7377	7377	7377	
NET PROFIT	-8384	-7951	-9367	-8994	-7913	-6761	-7045	-6979	-6588	-6166	-5738	-5338	-4924	-4494	-4003	
TOTAL ASSETS	128111	116170	131675	125413	118698	111983	118150	110773	104127	96750	130085	131128	121750	129621	122940	
INT. ON TOTAL ASSETS	3603	3485	3950	3742	3561	3359	3544	3323	3124	2903	4143	3934	3713	3889	3685	
INVESTMENT	13968	1724	22144	452			13544		732		48712	420		13248	596	
FOREIGN TOTAL	13576	1304	21524	376			13360		596		45964	280		13116	496	
LOCAL TOTAL	392	420	640	76			184		136		2748	140		132	100	
ELECTRIFICATION											3656					
FOREIGN CURRENCY											2968					
LOCAL CURRENCY											688					
SIGNALS & TELECOM		1604	2268	452			296		732		1504				596	
FOREIGN CURRENCY		644	1848	376			244		596		1276				496	
LOCAL CURRENCY		160	440	76			52		136		228				100	
CIVIL WORK																
FOREIGN CURRENCY																
LOCAL CURRENCY																
LAND ACQ & COMP																
LOCAL CURRENCY																
ROLLING STOCK	13968	720	19876				13248				43552	420		13248		
FOREIGN CURRENCY	13576	460	19676				13116				41720	280		13116		
LOCAL CURRENCY	392	260	200				132				1832	140		132		
-SALVAGE VALUE																99386

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

\*\*\*\*\*

( MIL. RP. ) PAGE 2 /PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INT DURING CONST.															

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*  
 ( MIL. RP. ) PAGE 3 /PART 1

BASE CASE	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>FINANCE PROGRAM</b>															
<b>FINANCE TOTAL</b>															
BORROWING	2411	3237	6720	10421	47628										
REPAYMENT															
BALANCE	2411	5646	12368	22789	70416	70416	70416	70416	70416	70416	70416	70416	70416	70416	67493
INTEREST						2339	2339	2339	2339	2339	2339	2339	2339	2339	2251
<b>FINANCE IN FOREIGN CCY</b>															
BORROWING	1587	2157	4880	6173	44548										
REPAYMENT															
BALANCE	1587	3744	7744	13917	58464	58464	58464	58464	58464	58464	58464	58464	58464	58464	55541
INTEREST						2339	2339	2339	2339	2339	2339	2339	2339	2339	2251
<b>FINANCE IN LOCAL CCY 1</b>															
BORROWING	824	1080	2720	4248	3080										
REPAYMENT															
BALANCE	824	1904	4624	8672	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>						-13176	-14760	-15915	-26461	-3516	-3352	-23283	-2894	-2535	-5525
<b>CASH IN</b>	2411	3237	6720	10421	47628	-185	182	595	613	-1178	-649	-505	-392	131	709
<b>OPERATING PROFIT</b>						-2795	-2449	-2036	-2680	-5025	-6325	-5483	-5289	-4783	-4222
DEPRECIATION						2610	2631	2631	3293	3847	3876	4898	4898	4914	4938
BORROWING	2411	3237	6720	10421	47628										
<b>CASH OUT</b>	2411	3237	6720	10421	47628	12991	14943	16511	27075	2339	2983	22779	2583	2667	6234
INVESTMENT	2364	3112	6456	9936	45776	10852	12684	14172	24736		564	28440	164	328	1868
INT DURING CONST.	47	125	264	485	1852										
REPAYMENT															2923
INTEREST						2339	2339	2339	2339	2339	2339	2339	2339	2339	2251

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*  
 ( MIL. RP. ) PAGE 4 /PART 1

BASE CASE	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
CR1 OPE REVENUE						3356	6913	10900	15349	20378	25992	32285	39088	46644	54395
CR1 OPE PROFIT						-2795	-5244	-7260	-9960	-14985	-19310	-24713	-30002	-34785	-39006
CR1 NET PROFIT						-5004	-9960	-14850	-21028	-29435	-37043	-46194	-55090	-63342	-70917
CR1 INVESTMENT	2364	5476	11932	21868	47644	78296	90980	105072	129808	129808	138372	150812	150976	151304	152344
CR1 REPAYMENT															2923
CR1 INTEREST						2339	4677	7016	9354	11693	14031	16370	18709	21047	23298
CR1 NET CASHFLOW						-13176	-27936	-43851	-70313	-73829	-77181	-108464	-103159	-105894	-111419



\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

\*\*\*\*\*  
( MIL. RP. ) PAGE 3 /PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>FINANCE PROGRAM</b>															
<b>FINANCE TOTAL</b>															
BORROWING															
REPAYMENT	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923
BALANCE	44570	61647	58723	55800	52877	49954	47031	44107	41184	38261	35338	32415	29491	26568	23645
INTEREST	2134	2017	1900	1783	1666	1549	1432	1315	1199	1082	965	848	731	614	497
<b>FINANCE IN FOREIGN CCY</b>															
BORROWING															
REPAYMENT	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923	2923
BALANCE	52618	49695	46771	43848	40925	38002	35079	32155	29232	26309	23386	20463	17539	14616	11693
INTEREST	2134	2017	1900	1783	1666	1549	1432	1315	1199	1082	965	848	731	614	497
<b>FINANCE IN LOCAL CCY 1</b>															
BORROWING															
REPAYMENT	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952
BALANCE															
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>	<b>-18178</b>	<b>-5466</b>	<b>-25745</b>	<b>-3675</b>	<b>-2226</b>	<b>-1159</b>	<b>-14023</b>	<b>-508</b>	<b>-940</b>	<b>89</b>	<b>-48318</b>	<b>282</b>	<b>1812</b>	<b>-11924</b>	<b>1044</b>
<b>CASH IN</b>	<b>648</b>	<b>1199</b>	<b>1242</b>	<b>1484</b>	<b>2363</b>	<b>3314</b>	<b>3877</b>	<b>3750</b>	<b>3913</b>	<b>4094</b>	<b>4282</b>	<b>4473</b>	<b>4666</b>	<b>4862</b>	<b>5060</b>
<b>OPERATING PROFIT</b>	<b>-4781</b>	<b>-4466</b>	<b>-5416</b>	<b>-5231</b>	<b>-4352</b>	<b>-3481</b>	<b>-3500</b>	<b>-3647</b>	<b>-3664</b>	<b>-3283</b>	<b>-3095</b>	<b>-2905</b>	<b>-2711</b>	<b>-2516</b>	<b>-2317</b>
<b>DEPRECIATION</b>	<b>5629</b>	<b>5665</b>	<b>6659</b>	<b>6715</b>	<b>6715</b>	<b>6715</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>
<b>BORROWING</b>															
<b>CASH OUT</b>	<b>19025</b>	<b>6664</b>	<b>24987</b>	<b>5158</b>	<b>4589</b>	<b>4473</b>	<b>17900</b>	<b>4239</b>	<b>4854</b>	<b>4005</b>	<b>52600</b>	<b>4191</b>	<b>3654</b>	<b>16785</b>	<b>4016</b>
<b>INVESTMENT</b>	<b>13968</b>	<b>1724</b>	<b>22164</b>	<b>452</b>			<b>13564</b>		<b>732</b>		<b>48712</b>	<b>420</b>		<b>13248</b>	<b>596</b>
<b>INT DURING CONST.</b>															
<b>REPAYMENT</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>	<b>2923</b>
<b>INTEREST</b>	<b>2134</b>	<b>2017</b>	<b>1900</b>	<b>1783</b>	<b>1664</b>	<b>1549</b>	<b>1432</b>	<b>1315</b>	<b>1199</b>	<b>1082</b>	<b>965</b>	<b>848</b>	<b>731</b>	<b>614</b>	<b>497</b>

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

\*\*\*\*\*  
( MIL. RP. ) PAGE 4 /PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>CUM OPE REVENUE</b>	<b>62992</b>	<b>72285</b>	<b>82331</b>	<b>93192</b>	<b>104931</b>	<b>117622</b>	<b>131379</b>	<b>145237</b>	<b>159319</b>	<b>173596</b>	<b>188041</b>	<b>202607</b>	<b>217527</b>	<b>232562</b>	<b>247795</b>
<b>CUM OPE PROFIT</b>	<b>-43787</b>	<b>-48254</b>	<b>-53678</b>	<b>-58901</b>	<b>-63257</b>	<b>-66654</b>	<b>-70155</b>	<b>-73882</b>	<b>-77265</b>	<b>-80549</b>	<b>-83644</b>	<b>-86549</b>	<b>-89260</b>	<b>-91776</b>	<b>-94093</b>
<b>CUM NET PROFIT</b>	<b>-79301</b>	<b>-87253</b>	<b>-96119</b>	<b>-105613</b>	<b>-115526</b>	<b>-120286</b>	<b>-127331</b>	<b>-134301</b>	<b>-140889</b>	<b>-147075</b>	<b>-154313</b>	<b>-161151</b>	<b>-167575</b>	<b>-173979</b>	<b>-179982</b>
<b>CUM INVESTMENT</b>	<b>166332</b>	<b>168056</b>	<b>190220</b>	<b>198672</b>	<b>198672</b>	<b>198672</b>	<b>204216</b>	<b>204216</b>	<b>204948</b>	<b>204948</b>	<b>253660</b>	<b>254080</b>	<b>254080</b>	<b>267328</b>	<b>267924</b>
<b>CUM REPAYMENT</b>	<b>5846</b>	<b>8770</b>	<b>11693</b>	<b>14616</b>	<b>17539</b>	<b>20463</b>	<b>23386</b>	<b>26309</b>	<b>29232</b>	<b>32155</b>	<b>35079</b>	<b>38002</b>	<b>40925</b>	<b>43848</b>	<b>46771</b>
<b>CUM INTEREST</b>	<b>25432</b>	<b>27449</b>	<b>29369</b>	<b>31132</b>	<b>32798</b>	<b>34348</b>	<b>35780</b>	<b>37096</b>	<b>38296</b>	<b>39376</b>	<b>40340</b>	<b>41188</b>	<b>41919</b>	<b>42533</b>	<b>43030</b>
<b>CUM NET CASHFLOW</b>	<b>-129597</b>	<b>-135062</b>	<b>-160807</b>	<b>-164482</b>	<b>-166789</b>	<b>-167868</b>	<b>-181890</b>	<b>-182399</b>	<b>-183339</b>	<b>-183250</b>	<b>-231568</b>	<b>-231286</b>	<b>-230274</b>	<b>-242198</b>	<b>-241154</b>

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 1 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
OPERATING PROFIT						-2795	-2649	-2036	-2680	-5025	-4325	-5403	-5289	-4783	-4222
OPERATING REVENUE						3356	3557	3987	4469	5009	5614	6293	6803	7355	7952
OPERATING EXPENSE						6151	6006	6023	7149	10034	9939	11695	12093	12138	12173
WORKING COST						3541	3375	3392	3056	6187	6064	6798	7195	7224	7243
MAINTENANCE COST						2293	2318	2318	2782	4165	4198	4927	4927	4946	4965
PERSONNEL COST						303	282	299	299	407	407	413	471	481	481
ELEC COST						944	775	775	775	1614	1458	1458	1797	1797	1797
DEPRECIATION						2610	2631	2631	3293	3847	3876	4898	4898	4914	4930
NET PROFIT						-5004	-4957	-4890	-6178	-8407	-7668	-9151	-8896	-8252	-7575
TOTAL ASSETS	1624	3996	9668	18664	24468	73622	83595	95136	116578	132731	109419	124962	120228	115642	111772
INT. ON TOTAL ASSETS						2209	2588	2854	3497	3382	3283	3749	3607	3469	3353
INVESTMENT	2364	3112	6456	9936	45776	10652	12604	14172	24736		564	20440	164	328	1040
FOREIGN TOTAL	1540	2032	3736	5688	42696	4972	7372	8464	19492		344	20020	164	220	816
LOCAL TOTAL	824	1080	2720	4248	3080	5680	5232	5708	5244		220	420		108	244
ELECTRIFICATION		732	3144	5876	2832	480	2968	3056	3340						
FOREIGN CURRENCY		396	1656	3132	1440	288	1500	1532	1504						
LOCAL CURRENCY		336	1488	2744	1392	312	1468	1524	1836						
SIGNALS & TELECOM		432	1232	1996	1996	252	692	1152	1152				164		732
FOREIGN CURRENCY		432	920	1392	1392	252	584	924	924				164		596
LOCAL CURRENCY			312	604	604		108	228	228						136
CIVIL WORK	1624	1208	1296	1324	776	7360	8504	9964	6956						
FOREIGN CURRENCY	1088	752	708	712	392	4152	5008	6088	3940						
LOCAL CURRENCY	536	456	588	612	384	3208	3496	3876	3016						
LAND ACQ & COMP			44			2020									
LOCAL CURRENCY			44			2020									
ROLLING STOCK	740	740	740	740	40172	420	420		13248		564	20440		328	328
FOREIGN CURRENCY	452	452	452	452	39632	280	280		13116		344	20020		220	220
LOCAL CURRENCY	288	288	288	288	500	140	140		132		220	420		108	108
-SALVAGE VALUE															

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 2 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INT DURING CONST.	186	291	621	1156	4321										

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
OPERATING PROFIT	-6781	-6466	-5416	-5231	-4352	-3401	-3500	-3647	-3464	-3203	-3095	-2905	-2711	-2516	-2317	
OPERATING REVENUE	8597	9293	10046	10860	11740	12690	13717	13898	14082	14267	14455	14646	14839	15035	15233	
OPERATING EXPENSE	13378	13759	15463	16092	16092	16092	17218	17545	17545	17551	17551	17551	17551	17551	17551	
WORKING COST	7749	8095	8004	9377	9377	9377	9840	10168	10168	10173	10173	10173	10173	10173	10173	
MAINTENANCE COST	5471	5513	6209	6313	6313	6313	6777	6777	6777	6777	6777	6777	6777	6777	6777	
PERSONNEL COST	481	516	530	590	590	590	590	637	637	643	643	643	643	643	643	
ELEC COST	1797	2065	2065	2474	2474	2474	2474	2754	2754	2754	2754	2754	2754	2754	2754	
DEPRECIATION	5629	5665	6659	6715	6715	6715	7377	7377	7377	7377	7377	7377	7377	7377	7377	
NET PROFIT	-8364	-7951	-8367	-8996	-7913	-6761	-7045	-6978	-6588	-6186	-5736	-5636	-5424	-5404	-5003	
TOTAL ASSETS	120111	116170	131675	125413	113698	111983	110150	110773	104127	96750	138005	131128	123750	129621	122640	
INT. ON TOTAL ASSETS	3603	3405	1950	3762	3561	3359	3544	3323	3124	2903	4143	3934	3713	3499	3685	
INVESTMENT	13968	1724	22164	452			13544		732		48712	420		13248	596	
FOREIGN TOTAL	13576	1304	21524	376			13360		596		45964	280		13116	496	
LOCAL TOTAL	392	420	640	76			184		136		2748	140		132	100	
ELECTRIFICATION											3656					
FOREIGN CURRENCY											2968					
LOCAL CURRENCY											688					
SIGNALS & TELECOM		1004	2288	452			296		732		1504				596	
FOREIGN CURRENCY		844	1848	376			244		596		1276				496	
LOCAL CURRENCY		160	440	76			52		136		228				100	
CIVIL WORK																
FOREIGN CURRENCY																
LOCAL CURRENCY																
LAND ACQ & COMP																
LOCAL CURRENCY																
ROLLING STOCK	13968	720	19876				13248				43552	420		13248		
FOREIGN CURRENCY	13576	460	19676				13116				41720	280		13116		
LOCAL CURRENCY	392	260	200				132				1832	140		132		
-SALVAGE VALUE																99386

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

( MIL. RP. ) PAGE 2 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INT DURING CONST.															

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

\*\*\*\*\*

( MIL. RP. ) PAGE 3 / PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>FINANCE PROGRAM</b>															
*****															
<b>FINANCE TOTAL</b>															
BORROWING	2470	3403	7077	11092	50097										
REPAYMENT								5182	5182	5182	5182	5182	5182	5182	5182
BALANCE	2470	5872	12949	24041	74138	74138	74138	68956	63774	58592	53410	48227	43045	37863	32681
INTEREST						5597	5597	5247	4781	4314	3848	3381	2915	2449	1982
<b>FINANCE IN FOREIGN CCY</b>															
BORROWING	1646	2323	4357	6844	47017										
REPAYMENT								5182	5182	5182	5182	5182	5182	5182	5182
BALANCE	1646	3968	8325	15169	62186	62186	62186	57004	51822	46640	41458	36275	31093	25911	20729
INTEREST						5597	5597	5247	4781	4314	3848	3381	2915	2449	1982
<b>FINANCE IN LOCAL CCY 1</b>															
BORROWING	824	1080	2720	4248	3080										
REPAYMENT															
BALANCE	824	1904	4624	8872	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>															
						-16434	-18018	-24006	-34086	-10674	-10043	-29508	-8653	-7827	-7516
*****															
CASH IN	2470	3403	7077	11092	50097	-185	182	595	613	-1178	-449	-585	-392	131	709
OPERATING PROFIT						-2795	-2449	-2036	-2680	-5025	-4325	-5403	-5289	-4783	-4222
DEPRECIATION						2610	2631	2631	3293	3847	3876	4898	4898	4914	4930
BORROWING	2470	3403	7077	11092	50097										
CASH OUT	2470	3403	7077	11092	50097	16249	18201	24601	34699	9496	9594	29004	8261	7959	8224
INVESTMENT	2364	3112	6456	9936	45776	10652	12604	14172	24736		564	20440	164	328	1860
INT DURING CONST.	106	291	621	1156	4321										
REPAYMENT								5182	5182	5182	5182	5182	5182	5182	5182
INTEREST						5597	5597	5247	4781	4314	3848	3381	2915	2449	1982

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

\*\*\*\*\*

( MIL. RP. ) PAGE 4 / PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
CLM OPE REVENUE						3356	6913	10900	15369	20378	25992	32285	39088	46444	54395
CLM OPE PROFIT						-2795	-5244	-7280	-9960	-14985	-19310	-24713	-30082	-34785	-39006
CLM NET PROFIT						-5004	-9960	-14850	-21028	-29435	-37643	-46194	-55090	-63342	-70917
CLM INVESTMENT	2364	5476	11932	21868	67644	78296	90900	105072	129808	129808	130372	150812	150976	151304	152364
CLM REPAYMENT								5182	10364	15547	20729	25911	31093	36275	41458
CLM INTEREST						5597	11194	16448	21221	25535	29383	32764	35679	38128	40119
CLM NET CASHFLOW						-16434	-14452	-58458	-92544	-103218	-113261	-142778	-151423	-159250	-166766

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

\*\*\*\*\*  
( MIL. RP. ) PAGE 3 /PART

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>FINANCE PROGRAM</b>															
*****															
<b>FINANCE TOTAL</b>															
*****															
BORROWING															
REPAYMENT	5182	5182	5182	5182											
BALANCE	27499	22316	17134	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952
INTEREST	1516	1049	583	117											
<b>FINANCE IN FOREIGN CCY</b>															
*****															
BORROWING															
REPAYMENT	5182	5182	5182	5182											
BALANCE	15547	10364	5182												
INTEREST	1516	1049	583	117											
<b>FINANCE IN LOCAL CCY 1</b>															
*****															
BORROWING															
REPAYMENT															
BALANCE	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952	11952
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
*****															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>	<b>-19818</b>	<b>-6757</b>	<b>-26687</b>	<b>-4267</b>	<b>2363</b>	<b>3314</b>	<b>-9667</b>	<b>3730</b>	<b>3181</b>	<b>4096</b>	<b>-44430</b>	<b>4053</b>	<b>4666</b>	<b>-8306</b>	<b>4466</b>
*****															
<b>CASH IN</b>	<b>648</b>	<b>1199</b>	<b>1242</b>	<b>1484</b>	<b>2363</b>	<b>3314</b>	<b>3877</b>	<b>3730</b>	<b>3913</b>	<b>4096</b>	<b>4282</b>	<b>4673</b>	<b>4666</b>	<b>4862</b>	<b>5260</b>
<b>OPERATING PROFIT</b>	<b>-4781</b>	<b>-4466</b>	<b>-5416</b>	<b>-5231</b>	<b>-4352</b>	<b>-3401</b>	<b>-3500</b>	<b>-3647</b>	<b>-3664</b>	<b>-3283</b>	<b>-3095</b>	<b>-2905</b>	<b>-2711</b>	<b>-2516</b>	<b>-2317</b>
<b>DEPRECIATION</b>	<b>5629</b>	<b>5665</b>	<b>4659</b>	<b>6715</b>	<b>6715</b>	<b>6715</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>	<b>7377</b>
<b>BORROWING</b>															
<b>CASH OUT</b>	<b>20666</b>	<b>7956</b>	<b>27929</b>	<b>5751</b>			<b>13544</b>		<b>732</b>		<b>48712</b>	<b>420</b>		<b>13248</b>	<b>5%</b>
<b>INVESTMENT</b>	<b>13968</b>	<b>1724</b>	<b>22164</b>	<b>452</b>			<b>13944</b>		<b>732</b>		<b>48712</b>	<b>420</b>		<b>13248</b>	<b>5%</b>
<b>INT DURING CONST.</b>															
<b>REPAYMENT</b>	<b>5182</b>	<b>5182</b>	<b>5182</b>	<b>5182</b>											
<b>INTEREST</b>	<b>1516</b>	<b>1049</b>	<b>583</b>	<b>117</b>											

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON MERAK LINE \*\*

\*\*\*\*\*  
( MIL. RP. ) PAGE 4 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>CUM OPE REVENUE</b>	<b>62992</b>	<b>72285</b>	<b>82331</b>	<b>93192</b>	<b>104931</b>	<b>117622</b>	<b>131339</b>	<b>145237</b>	<b>159319</b>	<b>173566</b>	<b>188041</b>	<b>202687</b>	<b>217527</b>	<b>232542</b>	<b>247795</b>
<b>CUM OPE PROFIT</b>	<b>-43787</b>	<b>-48254</b>	<b>-53670</b>	<b>-58901</b>	<b>-63253</b>	<b>-66654</b>	<b>-70155</b>	<b>-73802</b>	<b>-77265</b>	<b>-80549</b>	<b>-83664</b>	<b>-86549</b>	<b>-89259</b>	<b>-91776</b>	<b>-94093</b>
<b>CUM NET PROFIT</b>	<b>-79301</b>	<b>-87253</b>	<b>-96619</b>	<b>-105613</b>	<b>-113526</b>	<b>-120286</b>	<b>-127331</b>	<b>-134301</b>	<b>-140889</b>	<b>-147875</b>	<b>-154313</b>	<b>-161151</b>	<b>-167575</b>	<b>-173979</b>	<b>-179982</b>
<b>CUM INVESTMENT</b>	<b>166332</b>	<b>168056</b>	<b>190220</b>	<b>190672</b>	<b>190672</b>	<b>190672</b>	<b>204216</b>	<b>204216</b>	<b>204216</b>	<b>204216</b>	<b>204216</b>	<b>204216</b>	<b>204216</b>	<b>204216</b>	<b>204216</b>
<b>CUM REPAYMENT</b>	<b>46664</b>	<b>51822</b>	<b>57084</b>	<b>62186</b>	<b>62186</b>	<b>62186</b>	<b>62186</b>	<b>62186</b>	<b>62186</b>	<b>62186</b>	<b>62186</b>	<b>62186</b>	<b>62186</b>	<b>62186</b>	<b>62186</b>
<b>CUM INTEREST</b>	<b>41626</b>	<b>42675</b>	<b>43258</b>	<b>43375</b>	<b>43375</b>	<b>43375</b>	<b>43375</b>	<b>43375</b>	<b>43375</b>	<b>43375</b>	<b>43375</b>	<b>43375</b>	<b>43375</b>	<b>43375</b>	<b>43375</b>
<b>CUM NET CASHFLOW</b>	<b>-186584</b>	<b>-193341</b>	<b>-220028</b>	<b>-224295</b>	<b>-221932</b>	<b>-216618</b>	<b>-226286</b>	<b>-224555</b>	<b>-221374</b>	<b>-217280</b>	<b>-261710</b>	<b>-257657</b>	<b>-252492</b>	<b>-261378</b>	<b>-254914</b>

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 1 /PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	3767	4729	5589	11092	40449	322	322		1932	8468	13623	12332	20037	257	20734
WITH	3767	4729	5589	11092	40449	322	322		1932	8468	13623	12332	20037	257	20734
ELECTRIFICATION		626	2719	5094	2483				493	2483	2548	2715			
SIGNALS & TELECOM		368	975	1569	1569					184	495	814	818		684
CIVIL WORK	3183	3151	707	3423	2947				80	4858	10252	8476	3763		
LAND ACQ & COMP			604	423					1359	942					
ROLLING STOCKS	584	584	584	584	33450	322	322				328	328	15456	257	20129
-SALVAGE VALUE															
MAINT/OPER COST DIFF						-3282	-3682	-4751	-5767	-6884	-8129	-9537	-13605	-16669	-21270
WITH						3539	3367	3383	3383	3383	3403	3422	3963	5489	6043
RAIL															
ELECTRIC PAC						286	286	286	286	286	286	286	286	349	349
SIGNALS & TELECOM						155	155	155	155	155	155	155	155	238	238
CIVIL WORK						568	568	568	568	568	568	568	568	1063	1063
ROLLING STOCKS						1334	1353	1353	1353	1353	1372	1391	1932	1947	2658
PSNL COST						430	410	426	426	426	426	426	426	451	451
ELEG COST						846	678	678	678	678	678	678	678	1419	1263
WITHOUT						6821	7249	8134	9151	10267	11531	12959	17568	22358	27313
ROAD VEHICLE															
FUEL COST						3164	3362	3772	4242	4759	5343	6004	7272	8558	9861
ENGINE OIL						151	161	181	203	228	256	287	364	443	524
TYRE WEAR						-23	-25	-28	-31	-35	-39	-44	100	255	423
MAINTENANCE COST						596	634	709	799	893	1002	1126	1766	2437	3132
MAINTENANCE LABOUR						5	4	6	7	8	9	10	17	23	30
VEHICLE COST						2641	2807	3153	3547	3983	4478	5033	7266	9608	12069
PSNL COST						286	304	341	384	430	482	543	784	1034	1295
TOTAL BENEFIT						8297	8780	9827	11025	12339	13845	15495	16172	16860	17468
PAS TIME SAVING						8297	8780	9827	11025	12339	13845	15495	16172	16860	17468
NET FLOW	-3767	-4729	-5589	-11092	-40449	11256	12340	14577	14861	10755	8351	12780	9740	33472	18065
ERR	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 2 /PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP						3164	3362	3772	4242	4759	5343	6004	7272	8558	9861
*DIESEL SAV KL						6349	6755	7569	8518	9545	10698	12036	14464	16878	19315
*GASOLINE SAV KL						5891	6254	7024	7892	8864	9965	11185	13631	16150	18705
EMPLOYMENT GENE PERSONS	524	976	649	1771	1210	1100	429	388	610	2123	3278	2778	1296	448	678
WORKERS DURING CONST.	524	976	649	1771	1210	710	56		222	1735	2883	2388	908	44	266
PUKA EMPLOYEE						390	373	388	388	388	388	388	388	404	404
TOTAL COST SAV BENE	911668														
TOTAL PAS TIME SAVING	438868														
TOTAL FUEL SAVE	331512														
TOTAL WORKERS	15842														

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

BASE CASE

( MIL. RP. ) PAGE 1 /PART 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	611	611	9450	124	736	21163			604		41139	322			-82510
WITH	611	611	9450	124	736	21163			604		41139	322			-82510
ELECTRIFICATION SIGNALS & TELECOM CIVIL WORK LAND ACQ & COMP ROLLING STOCKS -SALVAGE VALUE	611	611	8832	124	736	19476			604		3526 1505	322			83128
MAINT/OPE COST DIFF	-26071	-31453	-36774	-42350	-48339	-53927	-60014	-61090	-62141	-63127	-64208	-65349	-66508	-67639	-68782
WITH	6423	6452	6761	7014	7020	7716	8191	8191	8191	8191	8191	8191	8191	8191	8191
RAIL															
ELECTRIC PAC	369	369	369	369	369	369	369	369	369	369	369	369	369	369	369
SIGNALS & TELECOM	238	238	238	238	238	238	316	316	316	316	316	316	316	316	316
CIVIL WORK	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063
ROLLING STOCKS	2693	2729	3038	3038	3038	3734	3734	3734	3734	3734	3734	3734	3734	3734	3734
PSNL COST	521	515	515	552	557	557	625	625	625	625	625	625	625	625	625
ELEC COST	1537	1537	1537	1753	1753	1753	2083	2083	2083	2083	2083	2083	2083	2083	2083
WITHOUT	32494	37905	43535	49364	55359	61643	68205	69201	70332	71318	72399	73540	74698	75830	76893
ROAD VEHICLE															
FUEL COST	11191	12551	13933	15326	16728	18156	19610	19910	20201	20484	20784	21101	21423	21736	22041
ENGINE OIL	607	694	783	874	966	1061	1160	1179	1195	1212	1229	1248	1268	1286	1304
TYRE WEAR	604	801	1015	1243	1487	1751	2039	2073	2102	2131	2162	2198	2235	2267	2298
MAINTENANCE COST	3870	4453	5477	6335	7211	8152	9152	9295	9426	9528	9662	9813	9966	10106	10215
MAINTENANCE LABOUR	38	45	54	62	71	81	91	92	94	95	96	98	99	101	102
VEHICLE COST	14617	17303	20112	23055	26104	29316	32664	33184	33718	34225	34775	35327	35888	36445	37012
PSNL COST	1566	1856	2161	2470	2792	3126	3488	3540	3595	3643	3691	3755	3819	3869	3922
TOTAL BENEFIT	18083	18606	19076	19543	19893	20231	20423	20655	20954	21192	21498	21743	21991	22309	22563
PAS TIME SAVING	18083	18606	19076	19543	19893	20231	20423	20655	20954	21192	21498	21743	21991	22309	22563
NET FLOW EIRR	43544 23.2	49447 23.2	46400 23.2	61769 23.2	67495 23.2	52995 23.2	80437 23.2	81745 23.2	82490 23.2	84319 23.2	44568 23.2	86770 23.2	88499 23.2	89948 23.2	173774 23.2

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

BASE CASE

( MIL. RP. ) PAGE 2 /PART 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	11191	12551	13933	15326	16728	18156	19610	19910	20201	20484	20784	21101	21423	21736	22041
*DIESEL SAV KL	21784	24368	26993	29549	32114	34703	37438	38070	38572	39059	39584	40257	40931	41671	42085
*GASOLINE SAV KL	21329	23968	26650	29419	32208	35070	37913	38448	39050	39630	40250	40818	41394	42042	42665
EMPLOYMENT GENE PERSONS	549	543	547	488	517	759	549	549	549	549	1376	645	549	549	549
WORKERS DURING CONST.	85	85	109		24	264			28	827	56				20
PJKA EMPLOYEE	464	458	458	488	493	493	549	549	549	549	549	549	549	549	549
TOTAL COST SAV BENE															
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 1 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	4520	5675	6707	13311	48539	387	387		2318	10161	16347	14799	24044	309	24880
WITH	4520	5675	6707	13311	48539	387	387		2318	10161	16347	14799	24044	309	24880
ELECTRIFICATION		751	3263	6112	2979				591	2980	3058	3258			
SIGNALS & TELECOM		442	1170	1883	1883				221	594	976	961			725
CIVIL WORK	3819	3781	848	4107	3537				96	5830	12302	16172	4516		
LAND ACQ & CONSP			725	507					1631	1131					
ROLLING STOCKS	701	701	701	701	40140	387	387				393	393	18547	309	24155
-SALVAGE VALUE															
MAINT/OPE COST DIFF						-3477	-4214	-5866	-6180	-7403	-8765	-10305	-14039	-18554	-23941
WITH						3992	3824	3840	3840	3940	3863	3886	4535	6212	6909
RAIL															
ELECTRIC FAC					247	247	247	247	247	247	247	247	247	443	443
SIGNALS & TELECOM					186	186	186	186	186	186	186	186	186	286	286
CIVIL WORK					682	682	682	682	682	682	682	682	682	1275	1275
ROLLING STOCKS					1601	1623	1623	1623	1623	1623	1646	1669	2318	2336	3189
PSNL COST					430	410	426	426	426	426	426	426	426	451	451
ELEC COST					846	676	676	676	676	676	676	676	676	1019	1263
WITHOUT					7468	7938	8906	10820	11242	12627	14191	19374	24767	30350	
ROAD VEHICLE															
FUEL COST					3164	3362	3772	4242	4759	5343	6004	7271	8558	9861	
ENGINE OIL					151	161	181	203	228	256	287	364	443	524	
TYRE WEAR					-23	-25	-28	-31	-35	-39	-44	100	255	423	
MAINTENANCE COST					715	760	850	958	1072	1203	1351	2119	2924	3758	
MAINTENANCE LABOUR					5	6	6	7	8	9	10	17	23	30	
VEHICLE COST					3169	3369	3783	4257	4780	5374	6044	7199	8529	10459	
PSNL COST					286	304	341	384	430	482	543	784	1034	1295	
TOTAL BENEFIT					8297	8780	9827	11025	12339	13845	15495	16172	16660	17468	
PAS TIME SAVING					8297	8780	9827	11025	12339	13845	15495	16172	16660	17468	
NET FLOW	-4520	-5675	-6707	-13311	-48539	11387	12508	14493	14887	9561	6262	11001	6967	35105	16029
EIRR	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 2 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP						3164	3362	3772	4242	4759	5343	6004	7271	8558	9861
*DIESEL SAV KL						6349	6755	7549	8518	9545	10698	12036	14464	16878	19315
*GASOLINE SAV KL						5891	6254	7024	7892	8864	9965	11185	13631	16150	18705
EMPLOYMENT GENR PERSONS	524	976	649	1771	1210	1100	429	388	610	2123	3276	2776	1296	446	670
WORKERS DURING CONST.	524	976	649	1771	1210	710	56	222	1735	2868	2385	908	44	266	
PJKA EMPLOYEE						190	373	388	388	388	388	388	388	404	404
TOTAL COST SAV BENE	1017633														
TOTAL PAS TIME SAVING	438668														
TOTAL FUEL SAVE	331512														
TOTAL WORKERS	15442														



\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	733	733	11341	149	884	25396			725		49367	387			-99012
WITH	733	733	11341	149	884	25396			725		49367	387			-99012
ELECTRIFICATION											4231				
SIGNALS & TELECOM			742	149	884	1544			725		1806				742
CIVIL WORK															
LAND ACQ & CORP															
ROLLING STOCKS	733	733	10596			23651					43130	387			
-SALVAGE VALUE															99754
MAINT/OPE COST DIFF	-28896	-34964	-40950	-47266	-54060	-60340	-67281	-68490	-69673	-70781	-71999	-73281	-74582	-75857	-77051
WITH	7295	7332	7703	7956	7962	8796	9287	9287	9287	9287	9287	9287	9287	9287	9287
RAIL															
ELECTRIC FAC	443	443	443	443	443	443	443	443	443	443	443	443	443	443	443
SIGNALS & TELECOM	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286
CIVIL WORK	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275
ROLLING STOCKS	3232	3275	3646	3646	3646	3646	4481	4481	4481	4481	4481	4481	4481	4481	4481
PSNL COST	522	515	515	522	527	527	625	625	625	625	625	625	625	625	625
ELEC COST	1537	1537	1537	1753	1753	1753	2083	2083	2083	2083	2083	2083	2083	2083	2083
WITHOUT	36191	42296	48653	55242	62021	69136	76568	77777	78961	80068	81287	82568	83869	85144	86338
ROAD VEHICLE															
FUEL COST	11191	12551	13933	15326	16728	18156	19610	19910	20201	20484	20784	21101	21423	21736	22041
ENGINE OIL	607	694	783	874	966	1061	1160	1179	1195	1212	1229	1246	1264	1284	1304
TYRE WEAR	684	801	1015	1243	1487	1751	2039	2373	2102	2131	2162	2194	2235	2267	2298
MAINTENANCE COST	4644	5581	6572	7601	8653	9782	10983	11154	11311	11433	11594	11775	11959	12127	12258
MAINTENANCE LABOUR	38	45	54	62	71	81	91	92	94	95	96	98	99	101	102
VEHICLE COST	17541	20763	24135	27666	31324	35179	39197	39821	40462	41070	41730	42393	43066	43758	44416
PSNL COST	1566	1856	2161	2470	2792	3126	3488	3548	3595	3643	3691	3755	3819	3869	3922
TOTAL BENEFIT	18083	18606	19076	19543	19893	20231	20423	20655	20954	21192	21498	21743	21991	22309	22563
PAS TIME SAVING	18083	18606	19076	19543	19893	20231	20423	20655	20954	21192	21498	21743	21991	22309	22563
NET FLOW	46246	52836	48686	66680	73069	55175	87704	89145	89902	91973	44131	94637	96573	98166	198625
EIRR	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 2 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	11191	12551	13933	15326	16728	18156	19610	19910	20201	20484	20784	21101	21423	21736	22041
NOISEL SAV KL	21784	24368	26493	29549	32114	34703	37438	38070	38572	39069	39584	40252	40911	41471	42005
NGASOLINE SAV KL	21329	23968	26650	29419	32208	35070	37913	38448	39050	39630	40250	40818	41396	42042	42665
EMPLOYMENT GENE PERSONS	549	543	567	488	517	759	549	549	569	549	1376	685	549	549	569
WORKERS DURING CONST.	85	85	109		24	266			20		827	56			20
PJKA EMPLOYEE	464	458	458	488	493	493	549	549	549	549	549	549	549	549	549
TOTAL COST SAV BENE															
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

===== ( MIL. RP. ) PAGE 1 /PART 1

CASE 2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	3767	4729	5589	11092	40449	322	322		1932	8468	13623	12332	20037	257	20734
WITH	3767	4729	5589	11092	40449	322	322		1932	8468	13623	12332	20037	257	20734
ELECTRIFICATION		626	2719	5094	2483				493	2483	2548	2715			
SIGNALS & TELECOM		368	975	1569	1569					184	495	814	818		604
CIVIL WORK	3183	3151	707	3423	2947				80	4858	10252	8476	3763		
LAND ACQ & COMP			604	423					1359	942					
ROLLING STOCKS	584	584	584	584	33450	322	322				328	328	15456	257	20129
-SALVAGE VALUE															
MAINT/OPE COST DIFF						-1279	-1753	-2362	-3080	-3869	-4742	-5732	-6747	-10924	-14208
WITH						3539	3367	3383	3383	3383	3403	3422	3963	5489	6043
RAIL															
ELECTRIC FAC						206	206	206	206	206	206	206	206	349	349
SIGNALS & TELECOM						155	155	155	153	155	155	155	155	238	238
CIVIL WORK						568	568	568	568	568	568	568	568	1063	1063
ROLLING STOCKS						1334	1353	1353	1353	1353	1372	1391	1932	1947	2658
PSNL COST						430	410	426	426	426	426	426	426	451	451
ELEC COST						846	676	676	676	676	676	676	676	1619	1263
WITHOUT						4818	5121	5745	6444	7252	8145	9154	12710	16412	20251
ROAD VEHICLE															
FUEL COST						2219	2358	2645	2974	3337	3747	4210	5501	6833	8204
ENGINE OIL						104	113	126	142	159	179	201	270	341	414
TIRE WEAR						6	6	7	8	9	10	11	64	121	182
MAINTENANCE COST						435	462	517	582	651	731	821	1228	1653	2091
MAINTENANCE LABOUR						4	4	5	5	6	7	7	11	15	20
VEHICLE COST						1649	1965	2207	2483	2788	3135	3523	5086	6725	8434
PSNL COST						200	213	239	269	301	338	380	549	724	906
TOTAL BENEFIT						5008	6146	6879	7718	8638	9691	10846	11320	11802	12228
PAS TIME SAVING						5008	6146	6879	7718	8638	9691	10846	11320	11802	12228
NET FLOW	-3767	-4729	-5589	-11092	-40449	6764	7577	9241	8866	4039	811	4246	30	22468	5702
EIRR	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

===== ( MIL. RP. ) PAGE 2 /PART 1

CASE 2

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP						2219	2358	2645	2974	3337	3747	4210	5501	6833	8204
*DIESEL SAV KL						4452	4736	5307	5973	6693	7501	8440	10989	13582	16246
*GASOLINE SAV KL						4131	4385	4925	5534	6215	6988	7843	10279	12817	15432
EMPLOYMENT GENE PERSONS	524	976	649	1771	1210	1100	429	388	610	2123	3276	2776	1296	448	670
WORKERS DURING CONST.	524	976	649	1771	1210	710	56		222	1735	2888	2388	908	44	266
P.P.A EMPLOYEE						390	373	388	388	388	388	388	388	404	404
TOTAL COST SAV BENE	652098														
TOTAL PAS TIME SAVING	307208														
TOTAL FUEL SAVE	305652														
TOTAL WORKERS	15842														

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	611	611	9450	124	736	21163			604		41139	322			-82510
WITH	611	611	9450	124	736	21163			604		41139	322			-82510
ELECTRIFICATION SIGNALS & TELECOM CIVIL WORK LAND ACQ & COMP ROLLING STOCKS -SALVAGE VALUE	611	611	8032	124	736	1207			604		3526 1505				618
MAINT/OPE COST DIFF	-17847	-22020	-26090	-30376	-35048	-39257	-43909	-44732	-45535	-46293	-47120	-47993	-44879	-49744	-50561
WITH	6423	6452	6761	7014	7020	7716	8191	8191	8191	8191	8191	8191	8191	8191	8191
RAIL															
ELECTRIC FAC	369	369	369	369	369	369	369	369	369	369	369	369	369	369	369
SIGNALS & TELECOM	238	238	238	238	238	238	316	316	316	316	316	316	316	316	316
CIVIL WORK	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063
ROLLING STOCKS	2693	2729	3036	3038	3038	3734	3734	3734	3734	3734	3734	3734	3734	3734	3734
PSNL COST	522	515	515	552	557	557	625	625	625	625	625	625	625	625	625
ELEC COST	1537	1537	1537	1753	1753	1753	2083	2083	2083	2083	2083	2083	2083	2083	2083
WITHOUT	24269	28472	32851	37390	42068	46972	52100	52922	53726	54484	55311	56184	57069	57935	58752
ROAD VEHICLE															
FUEL COST	9623	11096	12617	14177	15773	17427	19140	19436	19723	20001	20297	20610	20929	21238	21537
ENGINE OIL	490	569	652	736	823	913	1008	1024	1038	1052	1067	1084	1102	1117	1133
TYRE WEAR	248	318	394	475	561	652	752	785	776	786	798	811	824	836	848
MAINTENANCE COST	2556	3047	3562	4096	4639	5221	5837	5928	6012	6077	6163	6259	6357	6447	6517
MAINTENANCE LABOUR	24	29	34	39	45	50	56	57	58	59	60	61	62	63	63
VEHICLE COST	10232	12112	14079	16138	18272	20521	22865	23229	23603	23957	24343	24729	25122	25525	25908
PSNL COST	1096	1300	1512	1729	1954	2189	2442	2484	2516	2550	2584	2628	2673	2709	2745
TOTAL BENEFIT	12658	13024	13353	13680	13925	14162	14296	14459	14668	14834	15049	15220	15394	15616	15794
PAS TIME SAVING	12658	13024	13353	13680	13925	14162	14296	14459	14668	14834	15049	15220	15394	15616	15794
NET FLOW	29094	34433	29992	43932	48236	32256	58205	59190	59598	61128	21030	62891	64272	65360	148865
EIRR	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 2 /PART 2

CASE 2

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	9623	11096	12617	14177	15773	17427	19140	19436	19723	20001	20297	20610	20929	21238	21537
*DIESEL SAV KL	18991	21894	24896	27896	30968	34127	37501	38135	38638	39136	39653	40322	41003	41544	42080
*GASOLINE SAV KL	18152	20933	23801	26799	29868	33062	36298	36821	37409	37971	38577	39132	39694	40327	40933
EMPLOYMENT GENE PERSONS WORKERS DURING CONST.	549	543	567	488	517	759	549	549	569	549	1376	605	549	549	569
PJKA EMPLOYEE	85	85	109		24	266			20		827	56			20
TOTAL COST SAV BENE	464	458	458	488	493	493	549	549	549	549	549	549	549	549	549
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 1 /PART 1

CASE 3

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INVESTMENT DIFF	4520	5675	6707	13311	48539	387	387		2318	10161	16347	14799	24044	309	24880
WITH	4520	5675	6707	13311	48539	387	387		2318	10161	16347	14799	24044	309	24880
ELECTRIFICATION		751	3263	6112	2979				591	2980	3058	3258			
SIGNALS & TELECOM		442	1170	1883	1883				221	594	976	976			725
CIVIL WORK	3819	3781	648	4107	3537				96	5830	12302	10172	4516		
LAND ACQ & COMP			725	507					1631	1131					
ROLLING STOCKS	701	701	701	701	40148	387	387				393	393	18547	309	24155
-SALVAGE VALUE															
MAINT/OPE COST DIFF						-1283	-1782	-2450	-3237	-4100	-5055	-6137	-9437	-11876	-15448
WITH						3992	3824	3840	3840	3840	3863	3866	4535	6212	6909
RAIL															
ELECTRIC FAC					247	247	247	247	247	247	247	247	247	443	443
SIGNALS & TELECOM					186	186	186	186	186	186	186	186	186	286	286
CIVIL WORK					482	482	482	482	482	482	482	482	482	1275	1275
ROLLING STOCKS					1601	1623	1623	1623	1623	1644	1649	1649	2318	2316	3189
PSNL COST					430	418	426	426	426	426	426	426	426	451	451
ELEC COST					846	676	676	676	676	676	676	676	676	1419	1263
WITHOUT					5275	5606	6298	7077	7940	8918	10022	13972	18068	22357	
ROAD VEHICLE															
FUEL COST					2219	2358	2645	2974	3337	3747	4210	5501	6833	8204	
ENGINE OIL					106	113	126	142	159	179	201	270	301	414	
TYRE WEAR					6	6	7	8	9	10	11	11	64	121	182
MAINTENANCE COST					521	554	628	699	781	877	985	1473	1983	2510	
MAINTENANCE LABOUR					4	4	5	5	6	7	7	11	15	20	
VEHICLE COST					2218	2358	2648	2980	3344	3762	4228	6103	8070	10121	
PSNL COST					200	213	239	269	301	338	380	549	724	906	
TOTAL BENEFIT					5808	6146	6879	7716	8638	9691	10846	11320	11802	12228	
PAS TIME SAVINGS					5808	6146	6879	7716	8638	9691	10846	11320	11802	12228	
NET FLOW	-4520	-5675	-6707	-13311	-48539	6764	7542	9329	8637	2577	-1801	2184	-3287	23369	2795
EIRR	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 2 /PART 1

CASE 3

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP						2219	2358	2645	2974	3337	3747	4210	5501	6833	8204
*DIESEL SAV KL						4452	4736	5307	5973	6693	7501	8640	10989	13582	16294
*GASOLINE SAV KL						4131	4385	4925	5534	6215	6988	7843	10279	12617	15432
EMPLOYMENT GENR PERSONS	524	976	649	1771	1210	1100	429	388	610	2123	3276	2776	1296	448	678
WORKERS DURING CONST.	524	976		1771	1210	710	56		222	1735	2888	2388	908	44	266
PJKA EMPLOYEE						390	373	388	388	388	388	388	388	404	404
TOTAL COST SAV BENE	718551														
TOTAL PAS TIME SAVING	307208														
TOTAL FUEL SAVE	305452														
TOTAL WORKERS	15842														

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INVESTMENT DIFF	733	733	11341	149	884	25396			725		49367	387			-99012
WITH	733	733	11341	149	884	25396			725		49367	387			-99012
ELECTRIFICATION SIGNALS & TELECOM CIVIL WORK LAND ACQ & CORP ROLLING STOCKS -SALVAGE VALUE			742	149	884	1544			725		4231 1808				742
MAINT/OPE COST DIFF	-19532	-24171	-28676	-33481	-38688	-43324	-48553	-49467	-50362	-51204	-52125	-53094	-54078	-55042	-55958
WITH	7295	7332	7703	7956	7962	8796	9267	9267	9287	9287	9287	9287	9287	9287	9287
RAIL															
ELECTRIC FAC	443	443	443	443	443	443	443	443	443	443	443	443	443	443	443
SIGNALS & TELECOM	206	286	286	286	286	286	380	380	380	380	380	380	380	380	380
CIVIL WORK	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275
ROLLING STOCKS	3232	3275	3646	3646	3646	4481	4481	4481	4481	4481	4481	4481	4481	4481	4481
PSNL COST	522	515	515	552	557	557	625	625	625	625	625	625	625	625	625
ELEC COST	1537	1537	1537	1753	1753	1753	2083	2083	2083	2083	2083	2083	2083	2083	2083
WITHOUT	26827	31503	36379	41437	46650	52121	57840	58754	59649	60491	61412	62381	63365	64329	65237
ROAD VEHICLE															
FUEL COST	9623	11096	12617	14177	15773	17427	19140	19436	19723	20001	20297	20610	20929	21238	21537
ENGINE OIL	490	549	652	736	823	913	1008	1024	1038	1052	1067	1084	1102	1117	1133
TYRE WEAR	248	318	394	475	561	652	752	765	776	786	796	811	824	836	848
MAINTENANCE COST	3667	3657	4275	4915	5567	6255	7004	7114	7214	7293	7396	7511	7629	7736	7811
MAINTENANCE LABOUR	24	29	34	39	45	50	56	57	58	59	60	61	62	63	63
VEHICLE COST	12278	14534	16894	19366	21927	24625	27438	27375	28323	28749	29211	29675	30146	30630	31090
PSNL COST	1096	1300	1512	1729	1954	2189	2442	2484	2516	2550	2584	2628	2673	2709	2745
TOTAL BENEFIT	12658	13024	13353	13680	13925	14162	14296	14459	14668	14834	15049	15220	15394	15616	15794
PAS TIME SAVING	12658	13024	13353	13680	13925	14162	14296	14459	14668	14834	15049	15220	15394	15616	15794
NET FLOW	31457	36462	30689	47012	51729	32091	62849	63925	64304	66038	17807	67928	69472	70658	170755
EIRR	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9

\*\* ECONOMIC ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 2 /PART 2

CASE 3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ADDITIONAL INDEX															
FUEL SAV EFFECT MIL RP	9623	11096	12617	14177	15773	17427	19140	19436	19723	20001	20297	20610	20929	21238	21537
*DIESEL SAV KL	18991	21894	24896	27896	30968	34127	37501	38135	38638	39136	39653	40322	41003	41544	42080
*GASOLINE SAV KL	18152	20933	23801	26799	29868	33062	36298	36821	37409	37971	38577	39132	39694	40327	40933
EMPLOYMENT GENE PERSONS WORKERS DURING CONST.	549	543	567	488	517	759	549	549	549	549	1376	605	549	549	549
PJKA EMPLOYEE	85	85	109	24	24	266	20	20	20	827	56	56	549	549	20
TOTAL COST SAV BENE	464	458	458	488	493	493	549	549	549	549	549	549	549	549	549
TOTAL PAS TIME SAVING															
TOTAL FUEL SAVE															
TOTAL WORKERS															

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 1 /PART 1

BASE CASE	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
OPERATING PROFIT						-3631	-3343	-3074	-2753	-2394	-2030	-1617	-1230	-811	-5044
OPERATING REVENUE						2231	2365	2651	2971	3331	3733	4184	4685	5237	5846
OPERATING EXPENSE						5663	5709	5725	5725	5725	5763	5801	5815	5848	5910
WORKING COST						3609	3438	3454	3454	3454	3475	3496	3497	3497	3497
MAINTENANCE COST						2333	2353	2353	2353	2353	2373	2394	2395	2396	2396
PERSONNEL COST						430	410	426	426	426	426	426	426	426	426
ELEC COST						846	676	676	676	676	676	676	676	676	676
DEPRECIATION						2254	2270	2270	2270	2270	2268	2304	2304	2304	2304
NET PROFIT						-5573	-5227	-4889	-4519	-4331	-4340	-4260	-4260	-4260	-4260
TOTAL ASSETS	3320	7752	12472	23224	30656	64714	62780	60510	58843	64557	77013	88091	105445	101972	117993
INT. ON TOTAL ASSETS						1941	1883	1815	1765	1937	2310	2643	3163	3059	3540
INVESTMENT	3948	5060	6148	11940	40896	336	336		2404	9232	14744	13364	20432	268	20768
FOREIGN TOTAL	2624	2676	3160	6660	37480	224	224		256	4392	7304	6724	17920	180	20364
LOCAL TOTAL	1324	2384	2988	5280	3416	112	112		2148	4840	7440	6660	2512	88	404
ELECTRIFICATION		664	2936	5464	2454				524	2648	2716	2908			
FOREIGN CURRENCY		368	1540	2908	1396				256	1368	1396	1320			
LOCAL CURRENCY		296	1396	2556	1260				268	1280	1320	1588			
SIGNALS & TELECOM		368	1028	1676	1676					184	512	844	844		628
FOREIGN CURRENCY		368	776	1172	1172					184	424	688	688		512
LOCAL CURRENCY			252	504	504					68	156	156	156		116
CIVIL WORK	3320	3400	756	3612	3100				80	5152	11164	9280	4128		
FOREIGN CURRENCY	2240	1556	460	2196	1896					2840	5268	4500	1932		
LOCAL CURRENCY	1080	1844	296	1416	1204				80	2312	5896	4780	2196		
LAND ACQ & COMP									1800	1248					
LOCAL CURRENCY			800	540					1800	1248					
ROLLING STOCK	628	628	628	628	33464	336	336				352	352	15456	268	20140
FOREIGN CURRENCY	384	384	384	384	33016	224	224				216	216	15300	180	19852
LOCAL CURRENCY	244	244	244	244	448	112	112				136	136	156	88	288
-SALVAGE VALUE															

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 2 /PART 1

BASE CASE	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INT DURING CONST.	79	190	320	567	1789										

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 1 /PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
OPERATING PROFIT	-4008	-4134	-4073	-3434	-2459	-3071	-2413	-2252	-2089	-1924	-1757	-1587	-1415	-1241	-1065	
OPERATING REVENUE	6516	7254	8065	8958	9939	11016	12199	12359	12522	12688	12855	13024	13196	13370	13547	
OPERATING EXPENSE	11324	11385	12139	12392	12397	14087	14612	14612	14612	14612	14612	14612	14612	14612	14612	
WORKING COST	6544	6575	6884	7138	7143	7839	8317	8317	8317	8317	8317	8317	8317	8317	8317	
MAINTENANCE COST	4485	4523	4832	4832	4832	5528	5609	5609	5609	5609	5609	5609	5609	5609	5609	
PERSONNEL COST	522	515	515	552	557	557	625	625	625	625	625	625	625	625	625	
ELEC COST	1537	1537	1537	1753	1753	1753	2083	2083	2083	2083	2083	2083	2083	2083	2083	
DEPRECIATION	4780	4813	5254	5254	5254	6248	6295	6295	6295	6295	6295	6295	6295	6295	6295	
NET PROFIT	-8224	-7425	-7491	-6698	-5587	-6649	-5802	-5452	-5119	-4765	-4555	-5307	-4946	-4583	-4237	
TOTAL ASSETS	113860	109696	113914	108783	104289	119253	112959	106464	100997	96702	129641	123985	117498	111395	105748	
INT. ON TOTAL ASSETS	3416	3291	3417	3244	3129	3578	3369	3200	3030	2841	3498	3720	3531	3342	3172	
INVESTMENT	648	648	9472	124	760	21212			628		41536	336			648	
FOREIGN TOTAL	412	412	9276	124	640	20748			512		39096	224			532	
LOCAL TOTAL	236	236	196		120	464			116		2440	112			108	
ELECTRIFICATION											3672					
FOREIGN CURRENCY											3004					
LOCAL CURRENCY											668					
SIGNALS & TELECOM			640	124	760	1336			628		1552				640	
FOREIGN CURRENCY			532	124	640	1072			512		1316				532	
LOCAL CURRENCY			108		120	264			116		236				108	
CIVIL WORK																
FOREIGN CURRENCY																
LOCAL CURRENCY																
LAND ACQ & CONP																
LOCAL CURRENCY																
ROLLING STOCK	648	648	8832			19876					36312	336				
FOREIGN CURRENCY	412	412	8744			19676					34776	224				
LOCAL CURRENCY	236	236	88			200					1536	112				
-SALVAGE VALUE																86022

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 2 /PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INT DURING CONST.															

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 3 /PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>FINANCE PROGRAM</b>															
<b>FINANCE TOTAL</b>															
BORROWING	4027	5250	6468	12507	42685										2777
REPAYMENT	4027	9277	15746	28252	70938	70938	70938	70938	70938	70938	70938	70938	70938	70938	68161
BALANCE						2222	2222	2222	2222	2222	2222	2222	2222	2222	2139
INTEREST															
<b>FINANCE IN FOREIGN CCY</b>															
BORROWING	2703	2866	3488	7227	39269										2777
REPAYMENT	2703	5569	9050	16276	55546	55546	55546	55546	55546	55546	55546	55546	55546	55546	52769
BALANCE						2222	2222	2222	2222	2222	2222	2222	2222	2222	2139
INTEREST															
<b>FINANCE IN LOCAL CCY 1</b>															
BORROWING	1324	2384	2980	5280	3416										
REPAYMENT															
BALANCE															
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>															
						-1936	-3631	-3025	-5109	-11578	-16700	-14917	-22005	-2660	-26000
<b>CASH IN</b>															
	4027	5250	6468	12507	42685	-1378	-1073	-803	-803	-124	256	689	648	-370	-316
<b>OPERATING PROFIT</b>															
DEPRECIATION						-3631	-3343	-3076	-2753	-2394	-2030	-1617	-1430	-1111	-504
BORROWING	4027	5250	6468	12507	42685	2254	2270	2270	2270	2270	2288	2306	3078	3741	4768
<b>CASH OUT</b>															
	4027	5250	6468	12507	42685	2558	2558	2222	4626	11454	16966	15606	22654	2490	25684
<b>INVESTMENT</b>															
INT CURRING CONST.	3948	5060	6148	11948	40096	336	336		2404	9232	14744	13384	20432	268	20768
REPAYMENT	79	190	320	547	1789										
INTEREST						2222	2222	2222	2222	2222	2222	2222	2222	2222	2777
															2139

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 4 /PART 1

BASE CASE

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
CLM OPE REVENUE						2231	4597	7248	10219	13550	17203	21447	26152	31389	37235
CLM OPE PROFIT						-3631	-6975	-10969	-12802	-15196	-17226	-18843	-21273	-25303	-30448
CLM NET PROFIT						-5573	-10880	-15489	-20207	-24530	-28878	-33130	-38731	-45001	-54505
CLM INVESTMENT	3948	9008	15156	27896	67992	68328	68664	68664	71068	80300	95044	109428	129660	129128	149896
CLM REPAYMENT															2777
CLM INTEREST						2222	4444	6666	8687	11109	13331	15553	17775	19997	22135
CLM NET CASHFLOW						-3936	-7567	-10592	-15700	-27278	-43966	-58903	-80900	-83768	-109768



\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

===== ( MIL. RP. ) PAGE 3 / PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>FINANCE PROGRAM</b>															
=====															
<b>FINANCE TOTAL</b>															
-----															
BORROWING	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777
REPAYMENT	65383	62606	59829	57051	54274	51497	48720	45942	43165	40388	37610	34833	32056	29278	26501
BALANCE															
INTEREST	2027	1916	1805	1694	1583	1472	1361	1250	1139	1028	917	805	694	583	472
<b>FINANCE IN FOREIGN CCY</b>															
-----															
BORROWING	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777
REPAYMENT	49991	47214	44437	41659	38882	36105	33328	30550	27773	24996	22218	19441	16664	13886	11109
BALANCE															
INTEREST	2027	1916	1805	1694	1583	1472	1361	1250	1139	1028	917	805	694	583	472
<b>FINANCE IN LOCAL CCY 1</b>															
-----															
BORROWING															
REPAYMENT															
BALANCE	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
-----															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
<b>NET CASHFLOW</b>															
-----															
	-5481	-4663	-12874	-2775	-2325	-22284	-256	16	-338	566	-40692	789	1408	1693	1340
=====															
<b>CASH IN</b>															
	-28	678	1181	1820	2795	3177	3882	4443	4204	4371	4538	4708	4879	5054	5230
-----															
<b>OPERATING PROFIT</b>															
	-4808	-4134	-4073	-3434	-2459	-3071	-2413	-2252	-2049	-1924	-1757	-1587	-1415	-1241	-1065
-----															
<b>DEPRECIATION</b>															
	4780	4813	5254	5254	5254	6248	6295	6295	6295	6295	6295	6295	6295	6295	6295
-----															
<b>BORROWING</b>															
	5453	5342	14055	4595	5120	25441	4138	4027	4544	3805	45230	3919	3472	3361	3889
-----															
<b>CASH OUT</b>															
	648	648	9472	124	760	21212			628		41534	336			640
-----															
<b>INVESTMENT</b>															
	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777	2777
-----															
<b>INT DURING CONST.</b>															
	2027	1916	1805	1694	1583	1472	1361	1250	1139	1028	917	805	694	583	472
-----															
<b>REPAYMENT</b>															
-----															
<b>INTEREST</b>															

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

===== ( MIL. RP. ) PAGE 4 / PART 2

BASE CASE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CUM OPE REVENUE	43751	51005	59070	68028	77967	88983	101181	113541	126063	138751	151606	164630	177826	191196	204743
CUM OPE PROFIT	-35256	-39390	-43463	-48497	-54356	-62427	-74340	-87092	-99181	-11105	-12362	-14449	-16864	-21105	-26170
CUM NET PROFIT	-62729	-70154	-77645	-84942	-93930	-104578	-117360	-132332	-14951	-117716	-123371	-128678	-133624	-138207	-142444
CUM INVESTMENT	150544	151192	160864	168788	161548	182760	182760	182760	183386	183386	224924	225260	225260	225260	225900
CUM REPATMENT	5555	8332	11109	13886	16664	19441	22218	24996	27773	30550	33328	36105	38882	41659	44437
CUM INTEREST	24162	26079	27884	29578	31161	32633	33994	35244	36383	37410	38327	39132	39826	40410	40882
CUM NET CASHFLOW	-115249	-119912	-122766	-125561	-127886	-130170	-130427	-130411	-130750	-130184	-200675	-200086	-198678	-196983	-195645

== FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE ==

( MIL. RP. ) PAGE 1 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
OPERATING PROFIT						-3631	-3343	-3074	-2753	-2394	-2030	-1617	-2430	-4111	-5064
OPERATING REVENUE						2231	2365	2651	2972	3331	3733	4184	4685	5237	5846
OPERATING EXPENSE						5863	5709	5725	5725	5725	5763	5801	7115	9348	10910
WORKING COST						3609	3438	3454	3454	3454	3475	3496	4037	5607	6162
MAINTENANCE COST						2333	2353	2353	2353	2353	2373	2394	2935	3736	4467
PERSONNEL COST						430	410	426	426	426	426	426	426	451	451
ELEC COST						866	676	676	676	676	676	676	676	676	1419
DEPRECIATION						2254	2270	2270	2270	2270	2268	2306	3078	3741	4748
NET PROFIT						-5573	-5227	-4889	-4519	-4331	-4340	-4260	-5593	-7170	-8604
TOTAL ASSETS	3320	7752	12472	23224	30656	44714	62780	60510	58043	64557	77013	88091	105445	101972	117993
INT. ON TOTAL ASSETS						1941	1883	1815	1765	1937	2310	2643	3163	3059	3540
INVESTMENT	3948	5060	6148	11940	40896	336	336		2404	9232	14764	13364	20432	268	20768
FOREIGN TOTAL	2624	2676	3160	6660	37480	224	224		256	4392	7304	6724	17920	180	20344
LOCAL TOTAL	1324	2384	2988	5280	3416	112	112		2148	4840	7460	6640	2512	88	404
ELECTRIFICATION		664	2936	5464	2656				524	2648	2716	2908			
FOREIGN CURRENCY		368	1540	2908	1396				256	1368	1396	1320			
LOCAL CURRENCY		296	1396	2556	1260				268	1280	1320	1588			
SIGNALS & TELECOM		368	1028	1676	1676					184	512	844	848		628
FOREIGN CURRENCY		368	776	1172	1172					184	424	688	688		512
LOCAL CURRENCY			252	504	504						88	156	160		116
CIVIL WORK	3320	3400	756	3612	3100				80	5152	11164	9280	4128		
FOREIGN CURRENCY	2240	1556	460	2196	1896					2840	5268	4500	1932		
LOCAL CURRENCY	1080	1844	296	1416	1204				80	2312	5896	4780	2196		
LAND ACQ & COMP			800	540					1800	1248					
LOCAL CURRENCY			800	540					1800	1248					
ROLLING STOCK	628	628	628	628	3344	336	336				352	352	15456	268	20140
FOREIGN CURRENCY	384	384	384	384	33016	224	224				216	216	15300	180	19852
LOCAL CURRENCY	244	244	244	244	448	112	112				136	136	156	88	288
-SALVAGE VALUE															

== FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE ==

( MIL. RP. ) PAGE 2 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
INT DURING CONST.	180	441	761	1362	4212										

\*\* FINANCIAL ANALYSES FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 1 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
OPERATING PROFIT	-4808	-4134	-4073	-3434	-2459	-3071	-2413	-2252	-2089	-1924	-1757	-1587	-1415	-1241	-1065	
OPERATING REVENUE	6516	7254	8065	8950	9939	11016	12199	12359	12522	12688	12855	13024	13196	13370	13547	
OPERATING EXPENSE	11324	11388	12139	12392	12397	14087	14612	14612	14612	14612	14612	14612	14612	14612	14612	
WORKING COST	6544	6575	6884	7138	7143	7839	8317	8317	8317	8317	8317	8317	8317	8317	8317	
MAINTENANCE COST	4485	4523	4832	4832	4832	5528	5609	5609	5609	5609	5609	5609	5609	5609	5609	
PERSONNEL COST	522	515	515	552	557	557	625	625	625	625	625	625	625	625	625	
ELEC COST	1537	1537	1537	1753	1753	1753	2083	2083	2083	2083	2083	2083	2083	2083	2083	
DEPRECIATION	4700	4813	5254	5254	5254	6248	6295	6295	6295	6295	6295	6295	6295	6295	6295	
NET PROFIT	-8224	-7425	-7491	-6698	-5587	-6649	-5802	-5452	-5119	-4765	-5655	-5307	-4946	-4583	-4237	
TOTAL ASSETS	113850	109696	113914	108783	104289	119253	112959	106664	100997	94702	129943	123985	117690	111395	105740	
INT. ON TOTAL ASSETS	3416	3291	3417	3264	3129	3578	3389	3280	3030	2841	3898	3720	3531	3342	3172	
INVESTMENT	648	648	9472	124	760	21212			628		41536	134			648	
FOREIGN TOTAL	412	412	9276	124	640	20748			512		39096	224			532	
LOCAL TOTAL	236	236	196		120	664			116		2440	112			108	
ELECTRIFICATION											3672					
FOREIGN CURRENCY											3004					
LOCAL CURRENCY											668					
SIGNALS & TELECOM			640	124	760	1336			628		1552				640	
FOREIGN CURRENCY			532	124	640	1072			512		1316				532	
LOCAL CURRENCY			108		120	264			116		236				108	
CIVIL WORK																
FOREIGN CURRENCY																
LOCAL CURRENCY																
LAND ACQ & COMP																
LOCAL CURRENCY																
ROLLING STOCK	648	648	8532			19876					36312	134				
FOREIGN CURRENCY	412	412	8744			19676					34776	224				
LOCAL CURRENCY	236	236	88			200					1536	112				
-SALVAGE VALUE																86022

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 2 /PART 2

CASE 1

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
INT DURING CONST.															

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 3 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
FINANCE PROGRAM															
*****															
FINANCE TOTAL															
BORROWING	4128	5501	6909	13302	45108										
REPAYMENT								4963	4963	4963	4963	4963	4963	4963	4963
BALANCE	4128	9629	16539	29841	74948	74948	74948	69985	65022	60059	55096	50133	45170	40207	35264
INTEREST						5360	5360	5025	4578	4132	3685	3238	2792	2345	1898
FINANCE IN FOREIGN CCY															
BORROWING	2804	3117	3921	8022	41692										
REPAYMENT								4963	4963	4963	4963	4963	4963	4963	4963
BALANCE	2804	5921	9843	17865	59556	59556	59556	54593	49630	44667	39704	34741	29778	24815	19852
INTEREST						5360	5360	5025	4578	4132	3685	3238	2792	2345	1898
FINANCE IN LOCAL CCY 1															
BORROWING	1324	2384	2988	5280	3416										
REPAYMENT															
BALANCE	1324	3708	6696	11976	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392
INTEREST															
FINANCE IN LOCAL CCY 2															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
NET CASHFLOW															
						-7074	-6769	-10791	-12428	-18451	-23134	-28897	-27538	-7946	-27946
*****															
CASH IN	4128	5501	6909	13302	45108	-1378	-1073	-803	-483	-124	258	689	648	-370	-316
*****															
OPERATING PROFIT						-3631	-3343	-3074	-2753	-2394	-2030	-1617	-2638	-4111	-5064
DEPRECIATION						2254	2270	2270	2270	2270	2268	2306	3078	3741	4748
BORROWING	4128	5501	6909	13302	45108										
*****															
CASH OUT	4128	5501	6909	13302	45108	5696	5696	9988	11945	18327	23392	21585	28187	7576	27629
*****															
INVESTMENT	3948	5060	6148	11940	40896	336	336		2404	9232	14744	13344	20432	258	20768
INT DURING CONST.	180	441	761	1362	4212										
REPAYMENT								4963	4963	4963	4963	4963	4963	4963	4963
INTEREST						5360	5360	5025	4578	4132	3685	3238	2792	2345	1898

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

( MIL. RP. ) PAGE 4 /PART 1

CASE 1

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
CUM OPE REVENUE						2231	4597	7248	10219	13550	17283	21447	26152	31389	37235
CUM OPE PROFIT						-3631	-4975	-10049	-12802	-15196	-17226	-18843	-21275	-25383	-30448
CUM NET PROFIT						-5573	-10200	-15689	-20207	-24538	-28878	-33138	-38731	-45901	-54535
CUM INVESTMENT	3948	9008	15156	27096	67992	68328	68664	68664	71068	80300	95064	108428	128840	129128	149896
CUM REPAYMENT								4963	9926	14889	19852	24815	29778	34741	39704
CUM INTEREST						5360	10720	15745	20326	24455	28140	31379	34170	36516	38414
CUM NET CASHFLOW						-7074	-13443	-24634	-37063	-55513	-78647	-99544	-127082	-135028	-162974

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

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( MIL. RP. ) PAGE 3 /PART 2

CASE 1

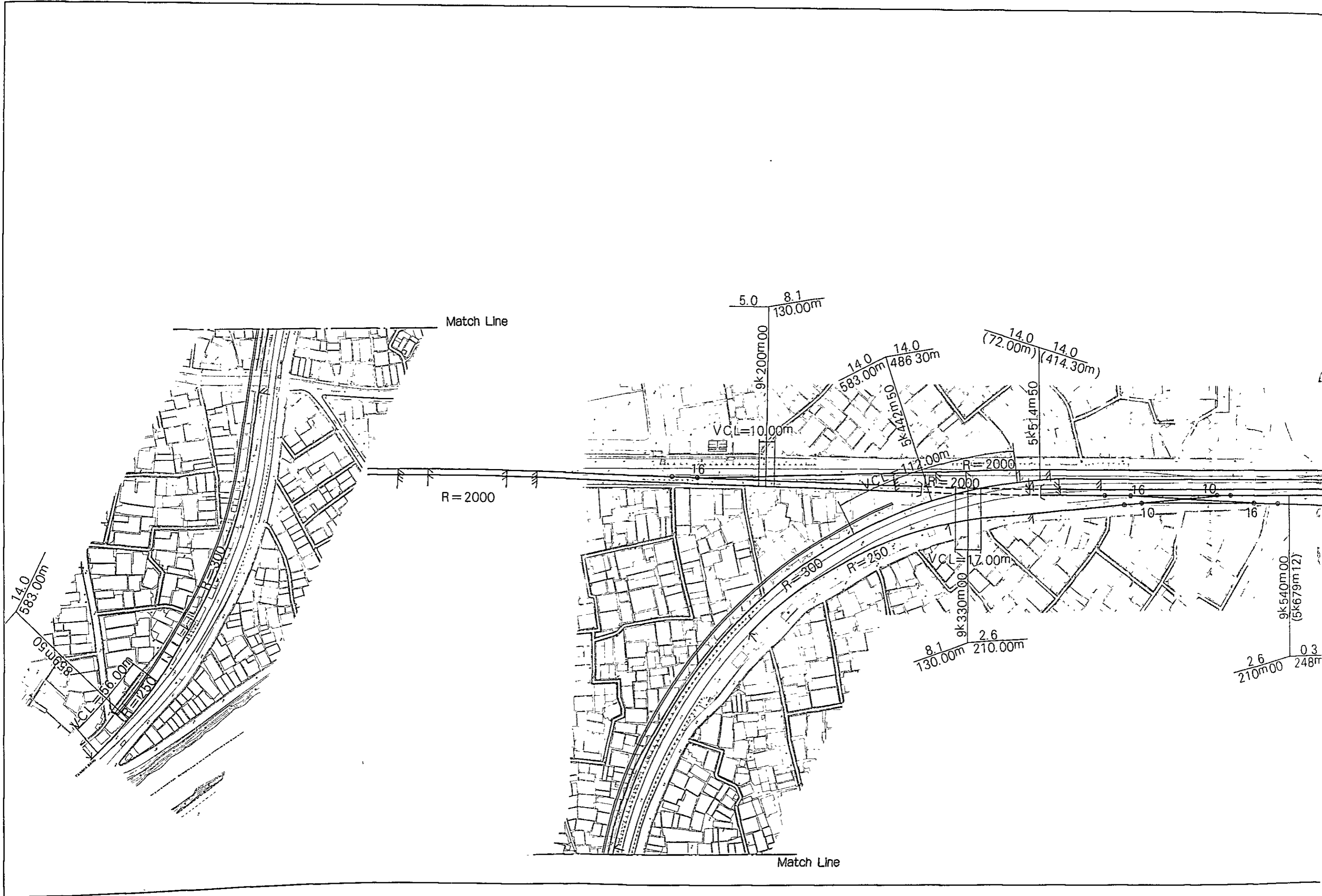
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>FINANCE PROGRAM</b>															
<b>FINANCE TOTAL</b>															
BORROWING															
REPAYMENT	4963	4963	4963	4963											
BALANCE	30281	25318	20355	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392
INTEREST	1452	1005	558	112											
<b>FINANCE IN FOREIGN CCY</b>															
BORROWING															
REPAYMENT	4963	4963	4963	4963											
BALANCE	14889	9926	4963												
INTEREST	1452	1005	558	112											
<b>FINANCE IN LOCAL CCY 1</b>															
BORROWING															
REPAYMENT															
BALANCE	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392	15392
INTEREST															
<b>FINANCE IN LOCAL CCY 2</b>															
BORROWING															
REPAYMENT															
BALANCE															
INTEREST															
NET CASHFLOW	-7091	-5938	-13812	-3379	2035	-18035	3882	4043	3578	4371	-36998	4372	4879	5054	4590
CASH IN	-28	678	1181	1820	2795	3177	3882	4043	4286	4371	4538	4708	4879	5054	5230
OPERATING PROFIT	-4808	-4134	-4073	-3434	-2459	-3071	-2413	-2252	-2089	-1924	-1757	-1587	-1415	-1241	-1063
DEPRECIATION	4780	4813	5254	5254	5254	6243	6295	6295	6295	6295	6295	6295	6295	6295	6295
BORROWING															
CASH OUT	7063	6616	14993	5199	760	21212			628		41536	336			640
INVESTMENT	648	648	9472	124	760	21212			628		41536	336			640
INT DURING CONST.															
REPAYMENT	4963	4963	4963	4963											
INTEREST	1452	1005	558	112											

\*\* FINANCIAL ANALYSIS FOR TRACK ADDITION AND OTHER IMPROVEMENTS ON TANGERANG LINE \*\*

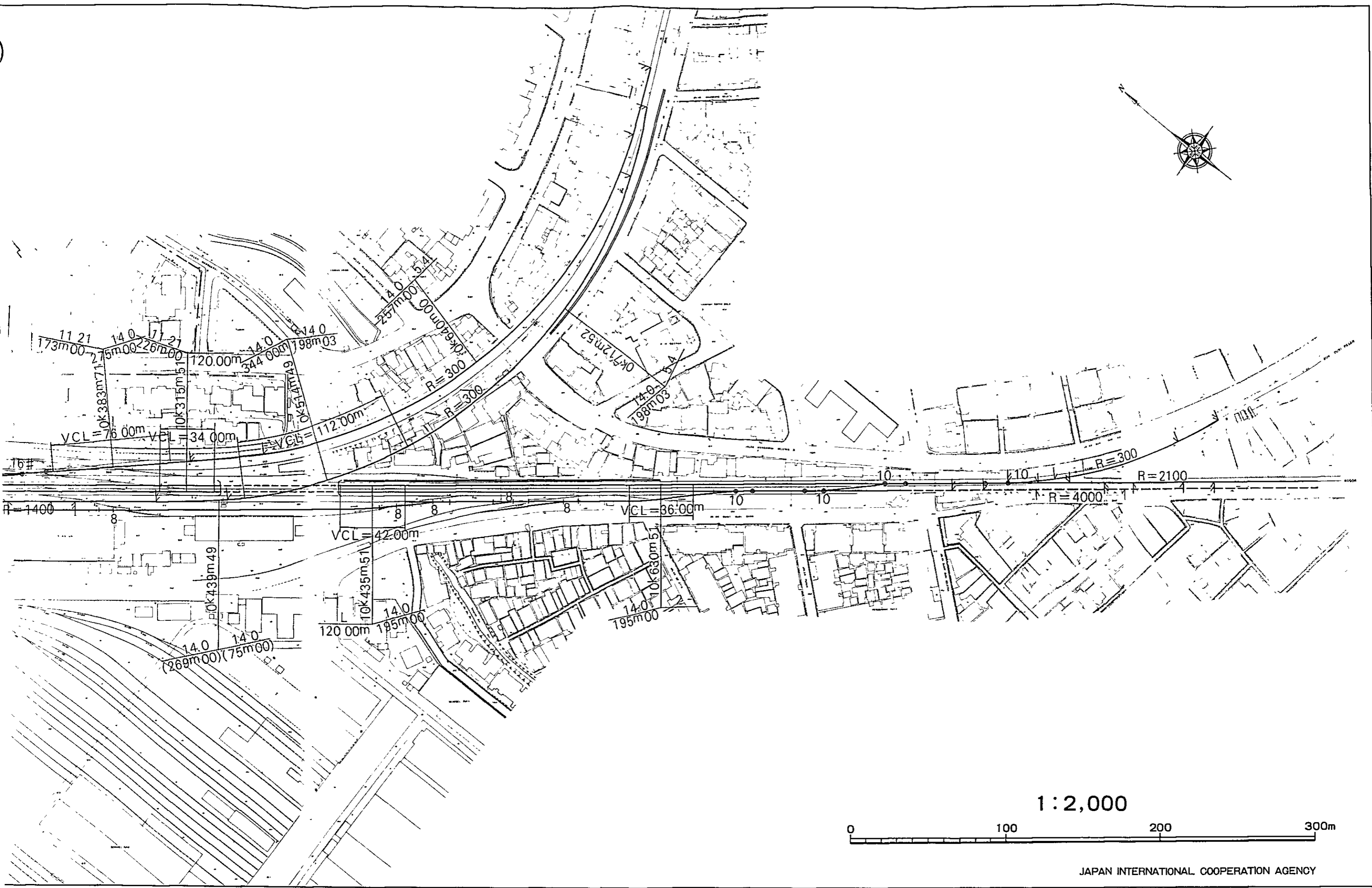
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( MIL. RP. ) PAGE 4 /PART 2

CASE 1

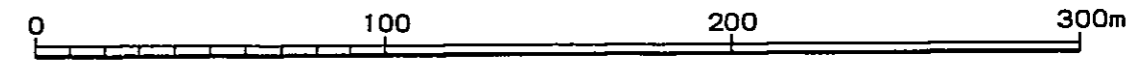
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CLM OPE REVENUE	43751	51005	59070	68028	77967	86983	101181	113541	126063	136751	151606	164430	177826	191196	204743
CLM OPE PROFIT	-35256	-39394	-43463	-46897	-49356	-52427	-54840	-57392	-59181	-61105	-62662	-64449	-65864	-67105	-68170
CLM NET PROFIT	-62729	-70154	-77845	-84342	-89930	-96578	-102380	-107832	-112951	-117718	-123371	-128678	-133624	-138207	-142444
CLM INVESTMENT	150544	151192	160684	160788	161548	182780	182780	182780	183380	183380	224924	225240	225240	225240	225908
CLM REPAYMENT	64867	49630	34593	29556	24556	19556	14556	9556	4556	5956	5956	5956	5956	5956	5956
CLM INTEREST	39866	48871	41429	41541	41541	41541	41541	41541	41541	41541	41541	41541	41541	41541	41541
CLM NET CASHFLOW	-170065	-176002	-189815	-193194	-191158	-209193	-205311	-201249	-197691	-193320	-230318	-225946	-221067	-216013	-211429







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