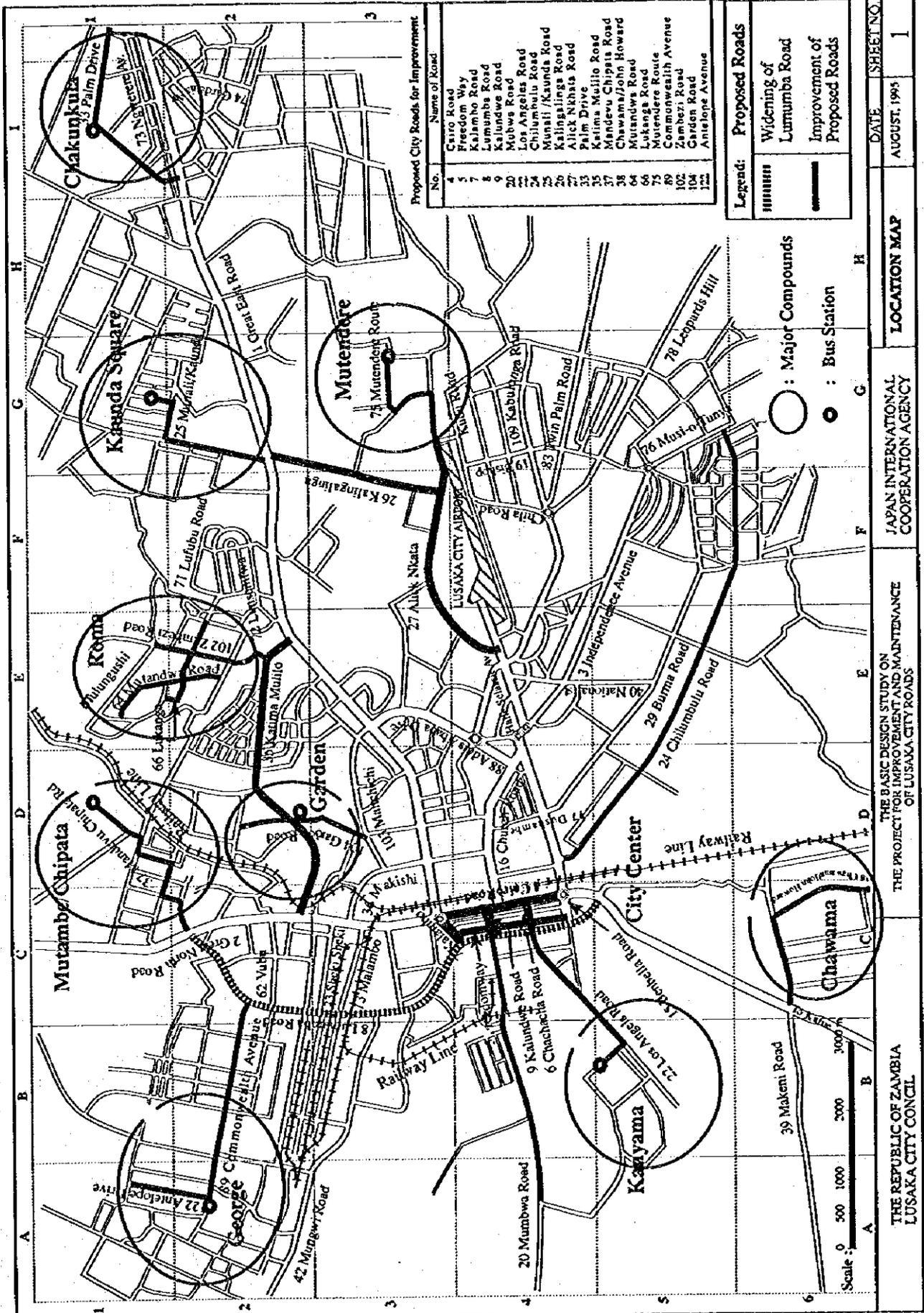


資料編一 A : 図面集

道路改良基本設計	図面 No.
(1) 位置図及び計画対象地域	No. 1
(2) 標準横断図	No. 2 - No. 8
(3) グループ1: コパウンド連絡道路改良計画	No. 9 - No. 26
(4) グループ2: 主要幹線道路改良計画	
4-1: ルムンバ道路拡幅計画	No. 27 - No. 46
4-2: 主要道路改良計画	No. 47 - No. 52
(5) バス停留所	No. 53
(6) 排水施設	No. 54 - No. 58
(7) 照明施設、信号機施設計画	No. 59
(8) 公共埋設物位置図	No. 60 - No. 62
(9) 雑工	No. 63



Proposed City Roads for Improvement	
No.	Name of Road
4	Cairo Road
5	Freedom Way
7	Kalamba Road
8	Lumumba Road
9	Kalundwe Road
20	Mubwa Road
21	Los Angeles Road
22	Chilumbulu Road
23	Munali/Kaunda Road
26	Kalingalingsa Road
27	Aliick Nkhata Road
33	Palm Drive
35	Kalima Muliio Road
37	Mandevu/Chippa Road
38	Chawama/John Howard
64	Mutandwa Road
66	Lukanga Road
75	Mutendere Road
89	Commonwealth Avenue
102	Cambezi Road
104	Garden Road
122	Antelope Avenue

Legend: Proposed Roads	
—————	Widening of Lumumba Road
- - - - -	Improvement of Proposed Roads
○	Major Compounds
●	Bus Station

THE REPUBLIC OF ZAMBIA
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THE BASIC DESIGN STUDY ON
THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
COOPERATION AGENCY

LOCATION MAP

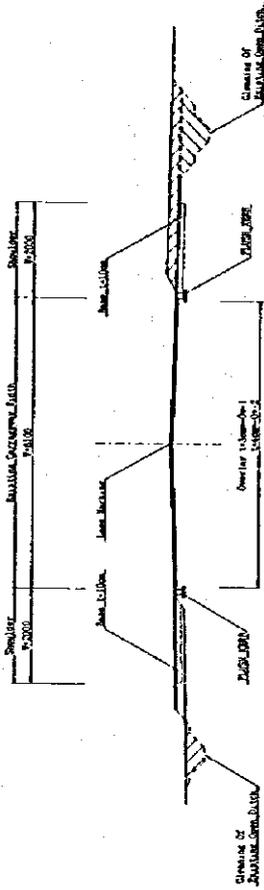
DATE: AUGUST, 1993

SHEET NO. 1

Ov-1 t-30a
Ov-2 t-40a

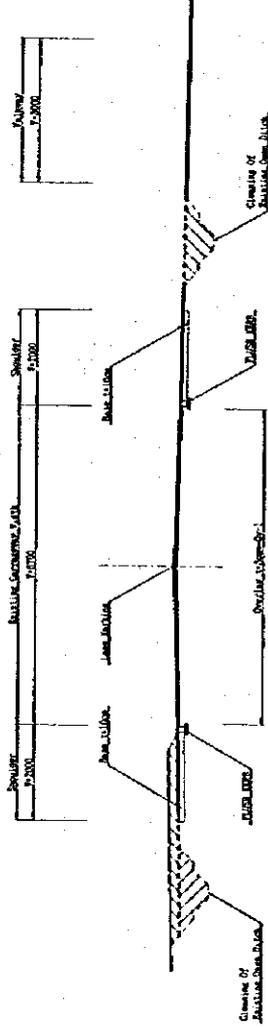
Cross section Type 2-1 Roads	
22 Los Angeles Rd	Ov-2
25 Mupali Kaunda Rd	Ov-1
35 Nandevu Chipata Rd	Ov-2
38 Chawama/John Howard Rd	Ov-2
64 Mutandwa Rd	Ov-1
66 Lukanga Rd	Ov-1
75 Mutendere Rd	Ov-2
102 Zambesi Rd	Ov-2
104 Garden Rd	Ov-1
30 Commonwealth Rd	Ov-2
122 Antelope Av	Ov-1
20 Kumbwa Rd	Ov-1
26 Kalimbalanga Rd	Ov-1
27 Allick Nkata Rd	Ov-2

Type A-1: Overlay(C-Class Road)



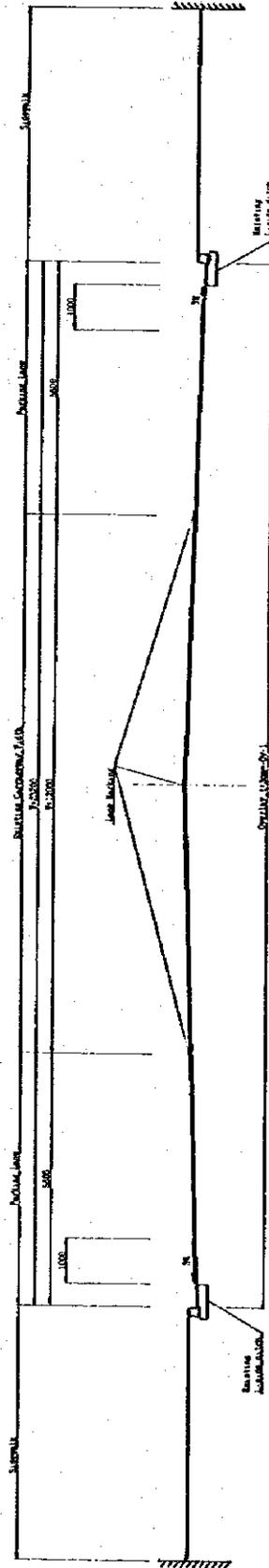
Cross section Type 2-2 Roads	
24 Chilumbulu Rd	Ov-1
39 Mutondo Kujilo Rd	Ov-2

Type A-2: Overlay(C-Class Road)



Cross section Type 2-3 Roads	
9 Kagalundwe Rd	Ov-1

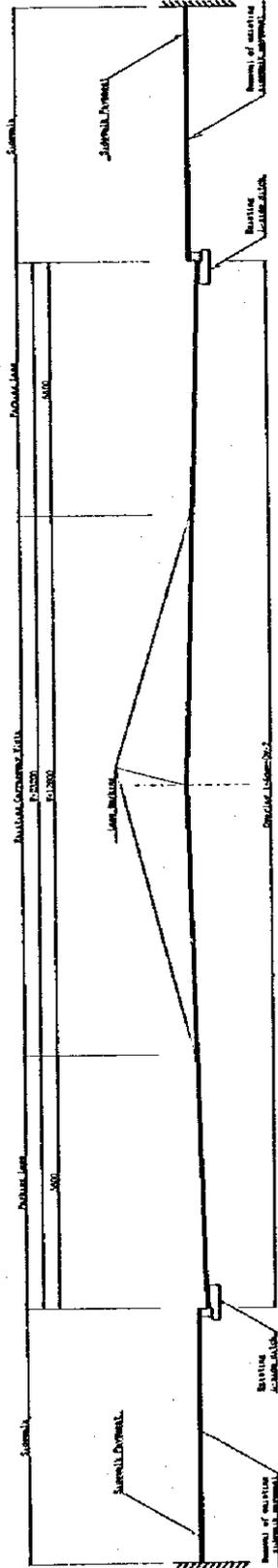
Type A-3: Overlay



THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	OVERLAY SECTION	DATE	SHEET NO
		TYPICAL CROSS SECTION (1)		AUGUST, 1995	2

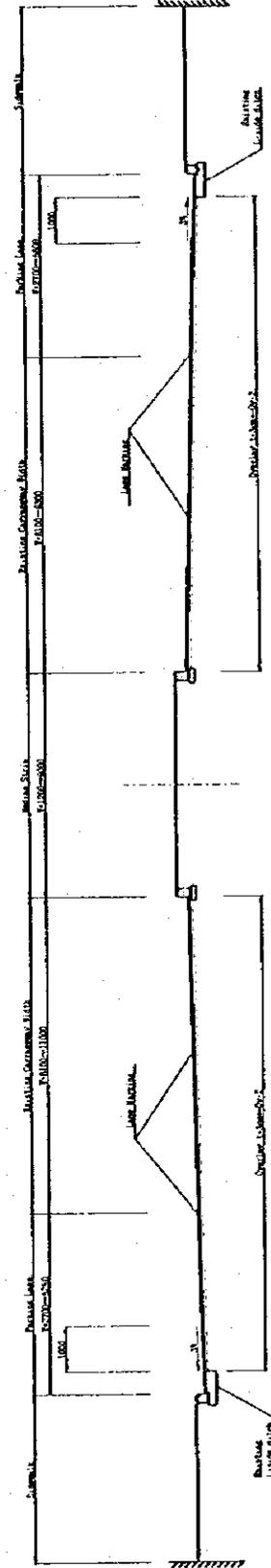
Cross section Type 2-4 Roads
22 Extension of Los Angeles Dr-2

Type A-4: Overlay



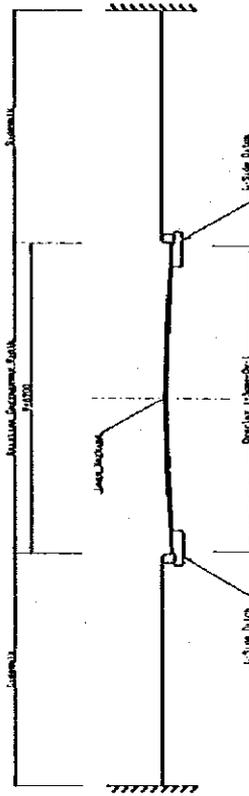
Cross section Type 2-5 Roads
4 Cairo Rd Ov-2
5 Freddie Way Ov-2
7 Kalambo Rd Ov-2

Type A-5: Overlay



Type A-6: Overlay(C-Class Road)

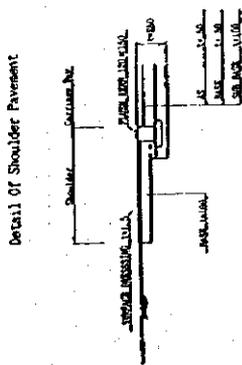
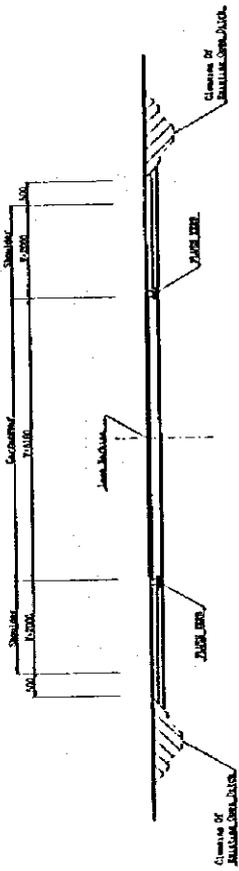
Cross section Type [1] Roads
24 Chilumbulu Rd [0v-1]



THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	OVERLAY SECTION TYPICAL CROSS SECTION (3)	DATE AUGUST, 1985	SHEET NO 4
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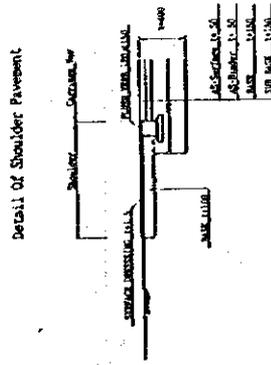
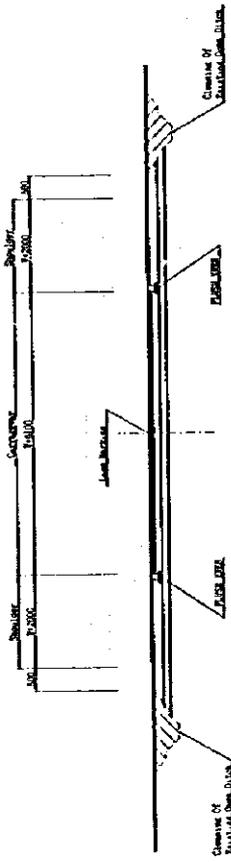
Type B-1: Reconstruction of Pavement

Cross section Type 2-1 Roads	
25	Mambili/Kaund Rd
64	Kutandwa Rd
66	Lukanga Rd
102	Zaberzi Rd
33	Palm Drive



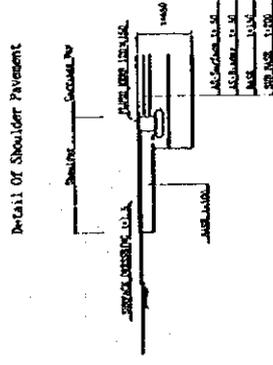
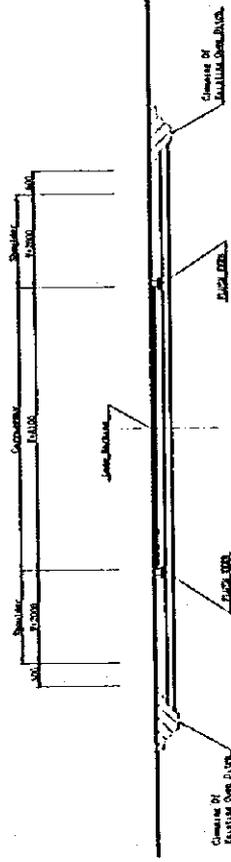
Type B-2: Reconstruction

Cross section Type 2-2 Roads	
39	Chavama/John Howard Rd
27	Alick Nkata Rd
21	Los Angeles Rd
37	Mardave Chipeta Rd
75	Kutandwa Rd



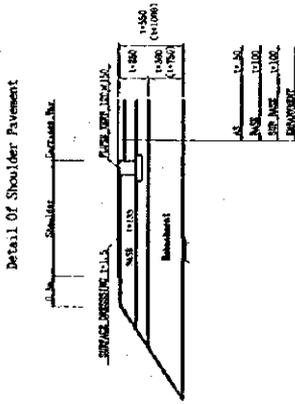
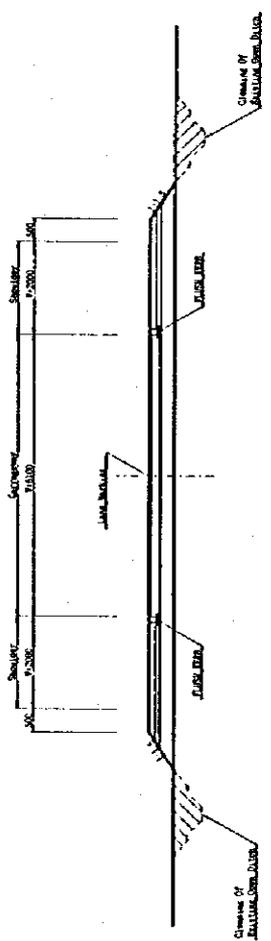
Type B-3: Reconstruction

Cross section Type 2-3 Roads	
20	Numbwa Rd



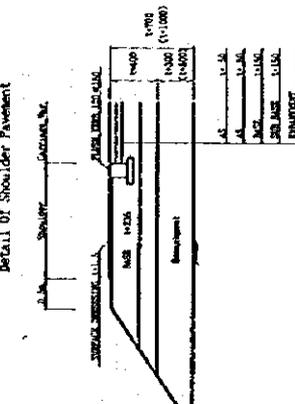
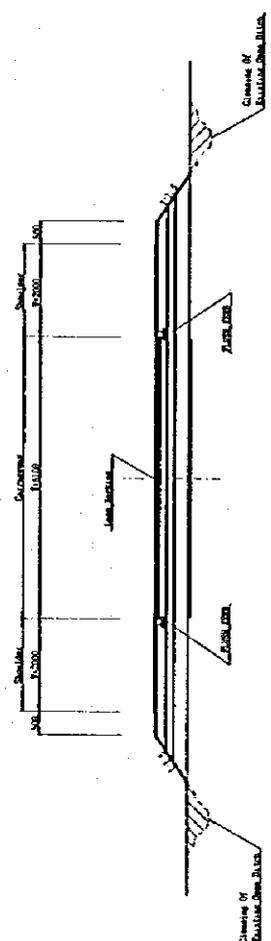
Type B-4: Reconstruction of Pavement (Embankment Section)

Cross section Type 3-1 Roads
 25 Koma/Isaund Rd
 64 Kutanga Rd
 102 Lukanga Rd
 102 Zanberi Rd
 33 Palm Drive



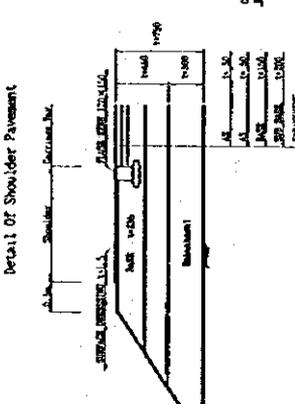
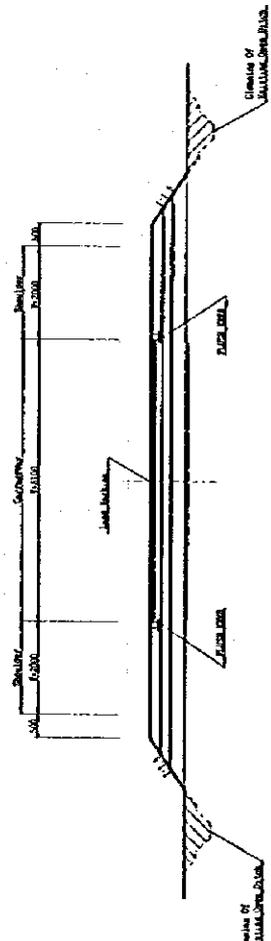
Type B-5: Reconstruction

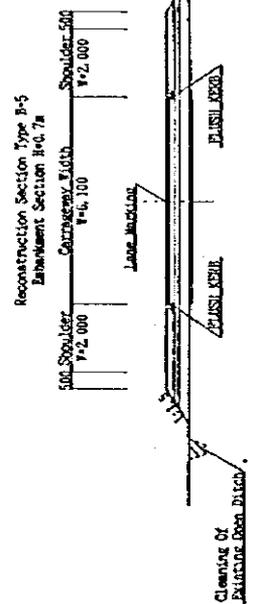
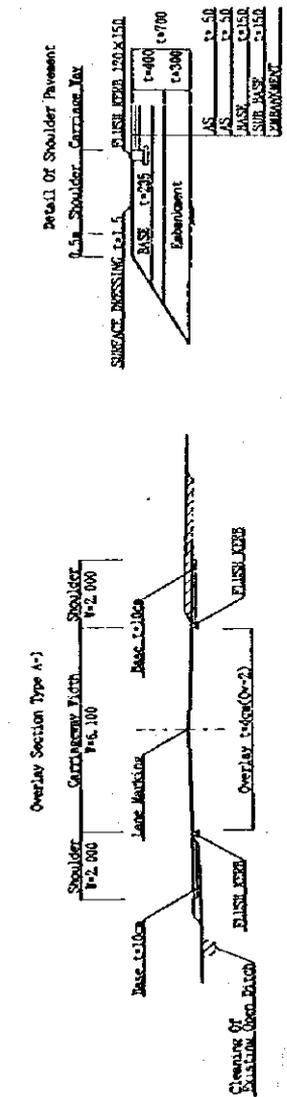
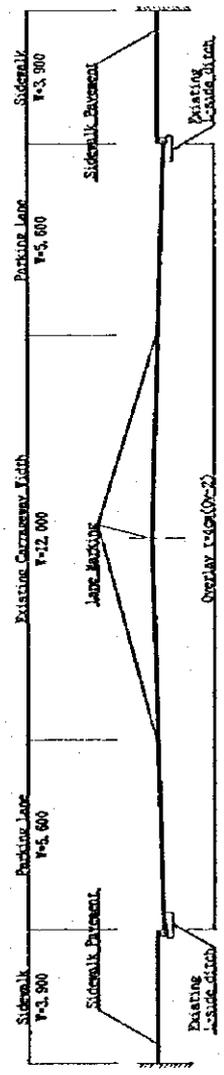
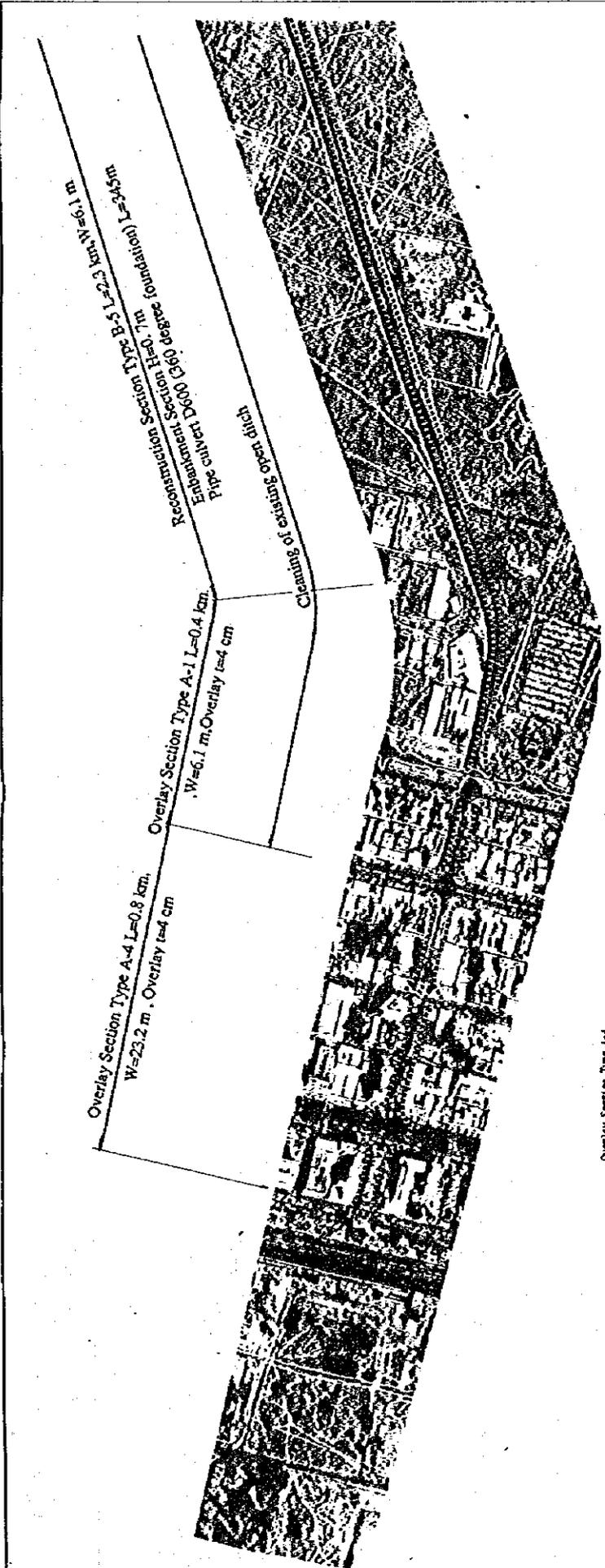
Cross section Type 3-2 Roads
 38 Chawaa/John Howard Rd
 27 Allick Nkata Rd
 22 Los Angeles Rd
 37 Mandev Chipata Rd
 75 Mutendere Rd



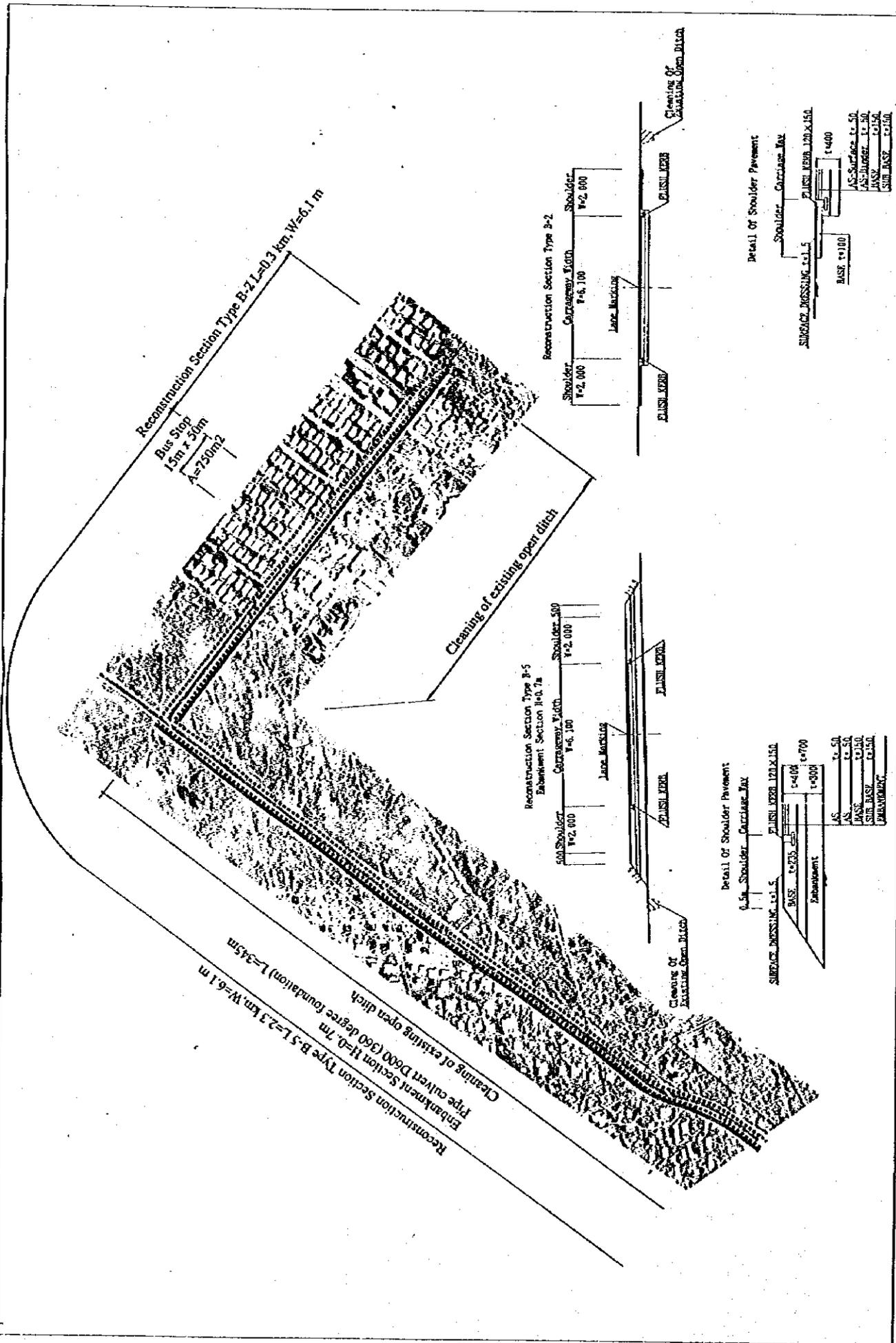
Type B-6: Reconstruction

Cross section Type 3-3 Roads
 20 Mumbwa Rd





THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS		JAPAN INTERNATIONAL COOPERATION AGENCY	22. Los Angeles Road(1/2)	DATE	SHEET NO
	PLAN AND PROFILE			AUGUST, 1995	9	



THE REPUBLIC OF ZAMBIA
LUSAKA CITY CONCIL

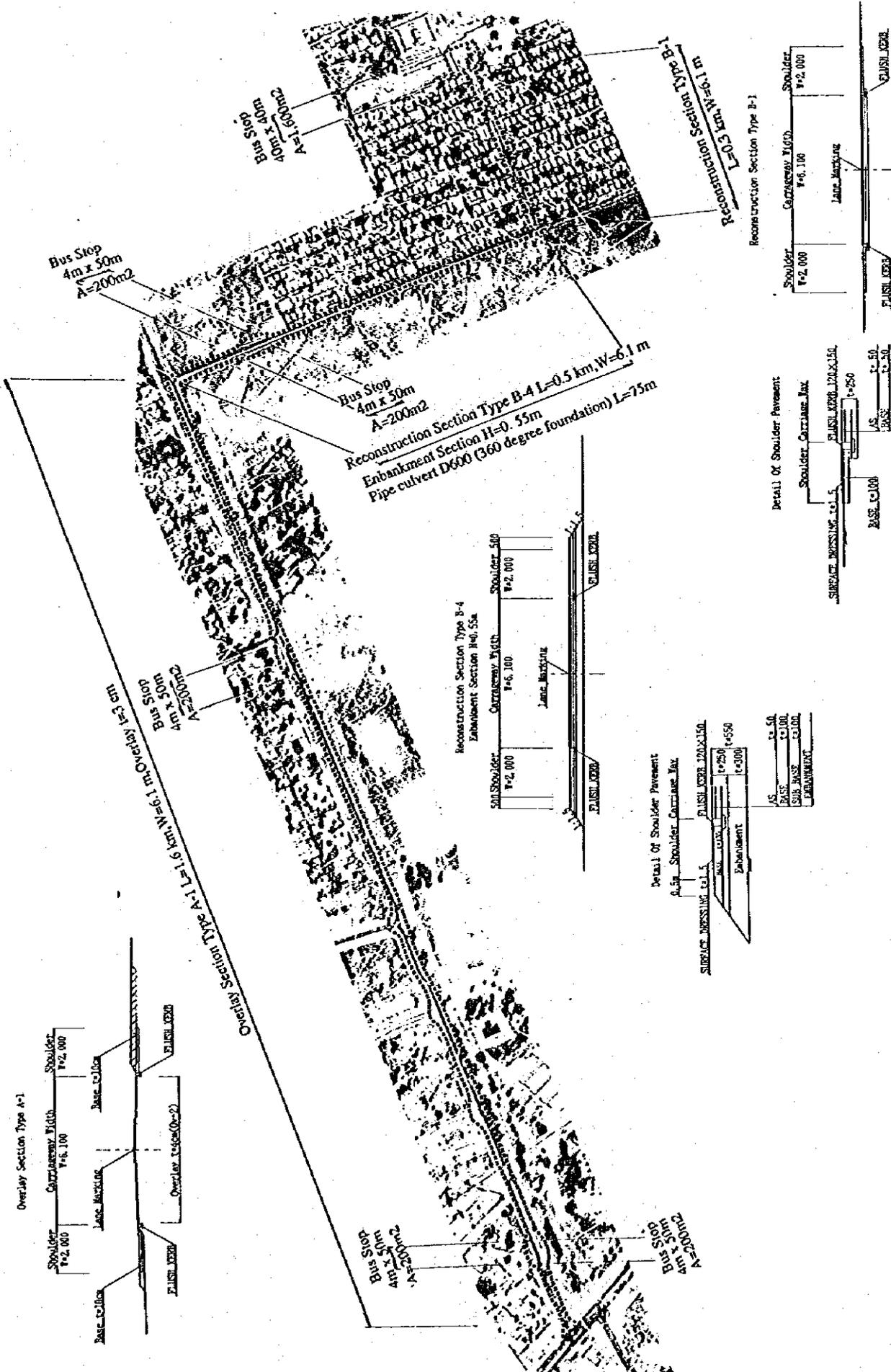
THE BASIC DESIGN STUDY ON
THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
COOPERATION AGENCY

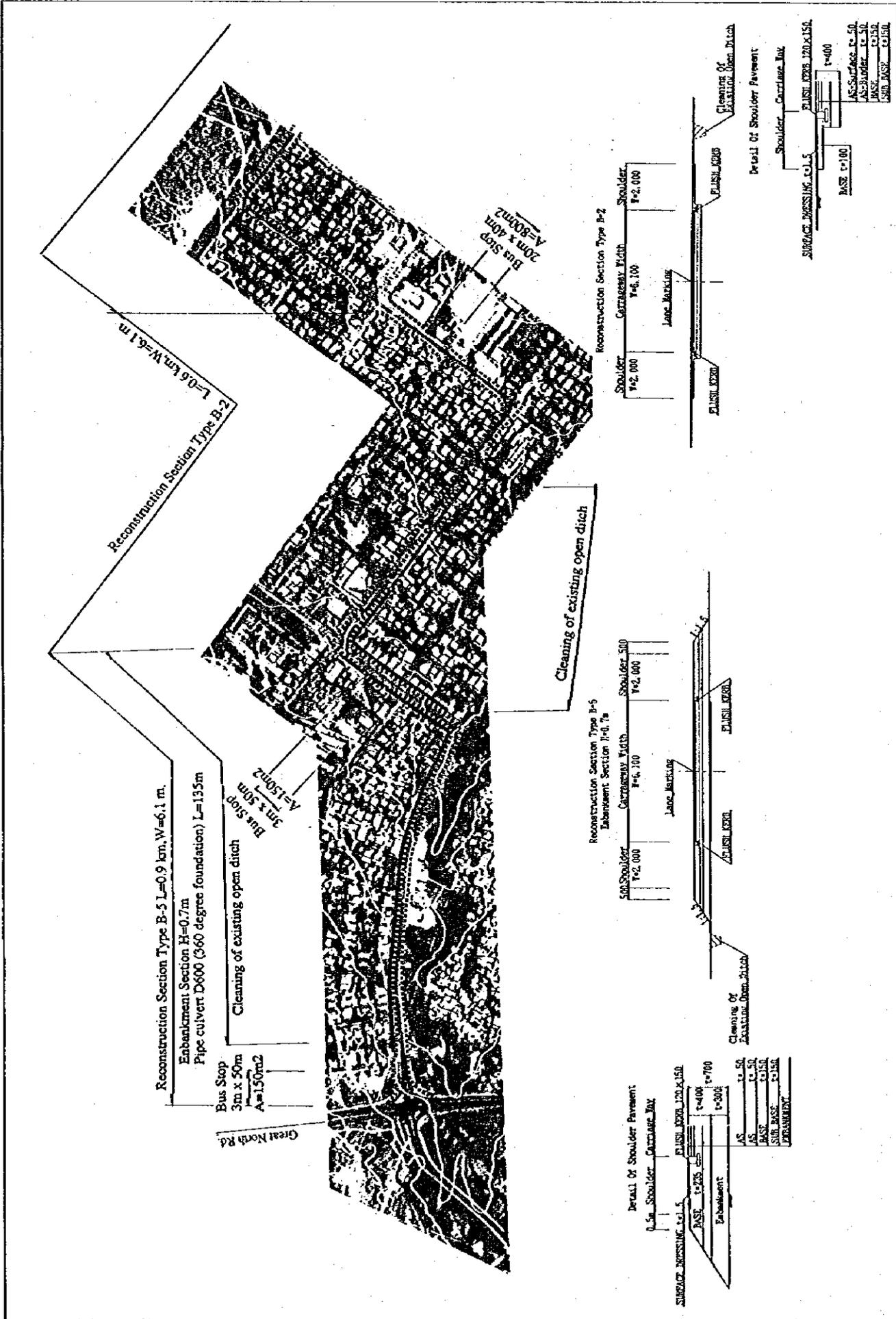
22. Los Angeles Road(2/2)

DATE
AUGUST, 1995

SHEET NO
10



THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS		JAPAN INTERNATIONAL COOPERATION AGENCY	25. Manali Kaunda Road (1/1)	DATE	SHEET NO
				PLAN AND PROFILE	AUGUST, 1995	11



THE REPUBLIC OF ZAMBIA
LUSAKA CITY COUNCIL

THE BASIC DESIGN STUDY ON
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OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
COOPERATION AGENCY

37. Mandevu Chipata Road (L/2) DATE AUGUST, 1986

PLAN AND PROFILE

SHEET NO. 12

Reconstruction Section Type B-5 L=2.1 km, W=6.1 m
 Embankment Section H=0.7m
 Pipe culvert D600 (3.60 degree foundation) L=315m

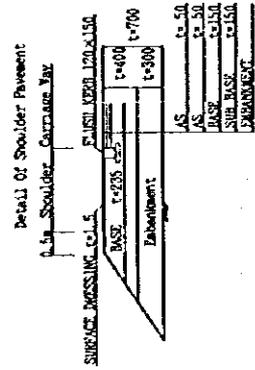
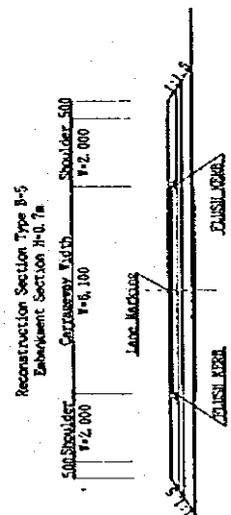
Cleaning of existing open ditch

Bus Stop
 3m x 50m
 A=150m²

Bus Stop
 20m x 60m
 A=1,200m²

Bus Stop
 3m x 50m
 A=150m²

Kasungu Rd.



Reconstruction Section Type B-5 L=2.3 km, W=6.1 m

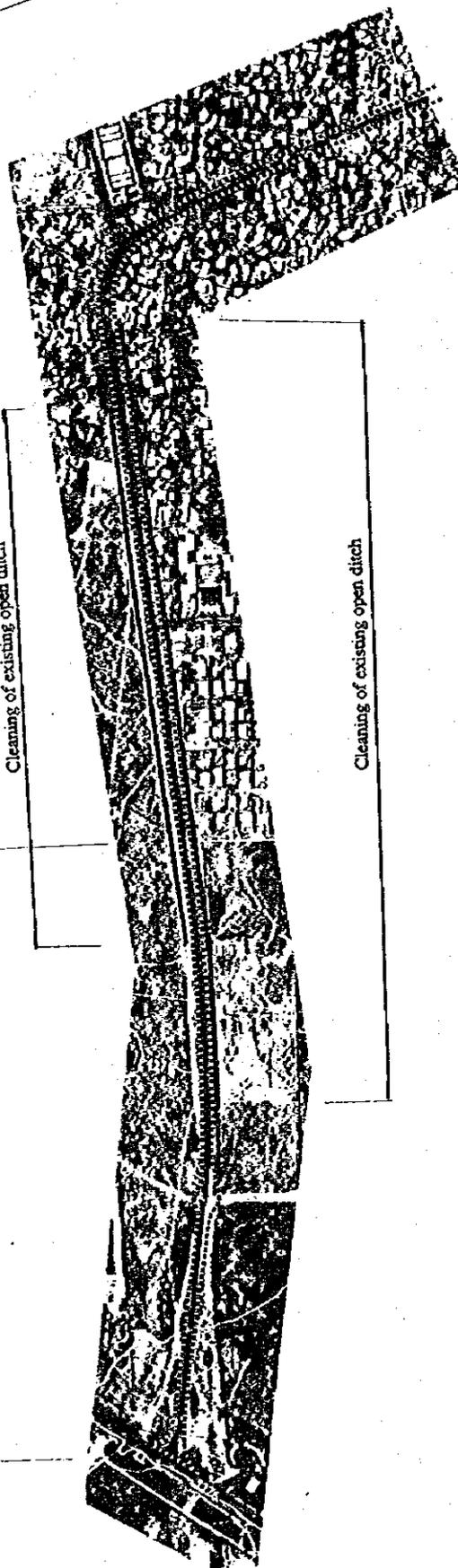
Enbankment Section H=0.7m
Pipe culvert D600 (360 degree foundation) L=345m

Cleaning of existing open ditch

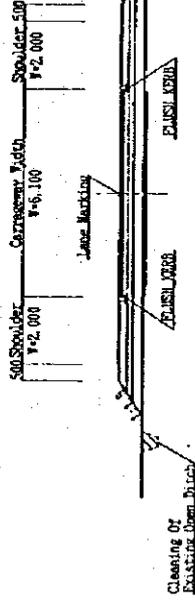
Cleaning of existing open ditch

Reconstruction Section Type B-5 L=0.7 km, W=6.1 m

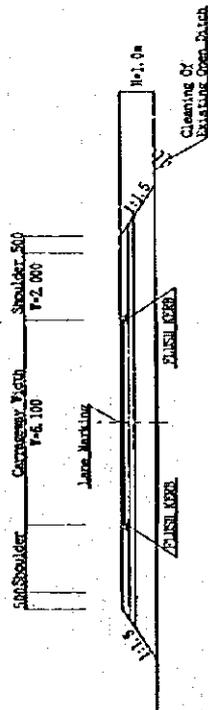
Enbankment Section H=1.0m
Pipe culvert D600 (360 degree foundation) L=105m

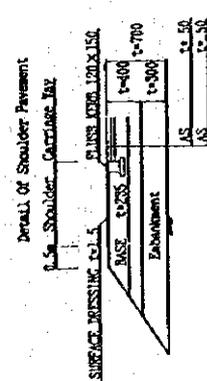
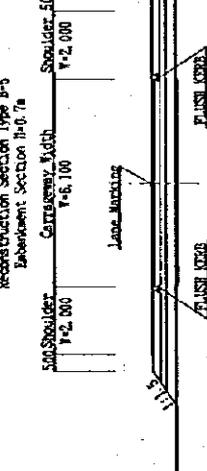
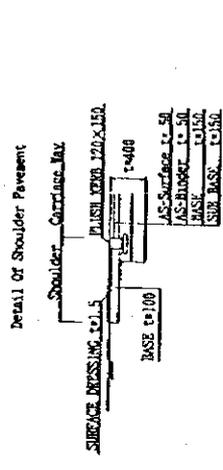
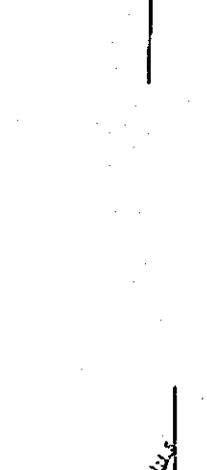
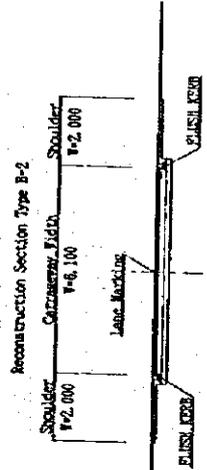
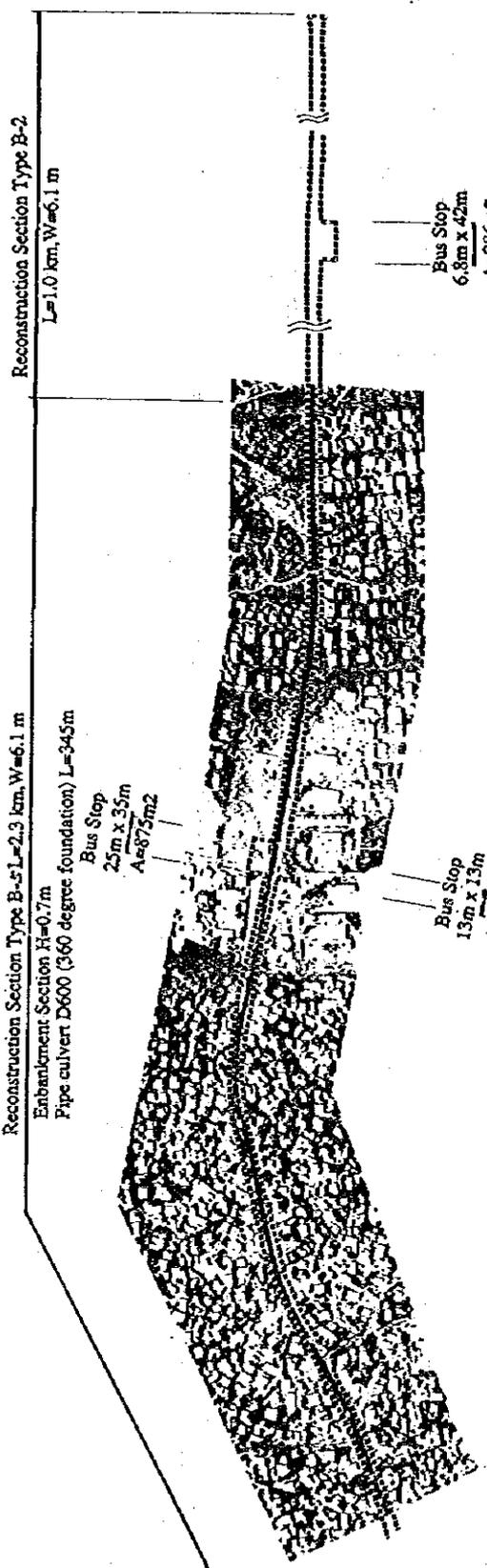


Reconstruction Section Type B-5
Enbankment Section H=0.7m



Reconstruction Section Type B-5
Enbankment Section H=1.0m



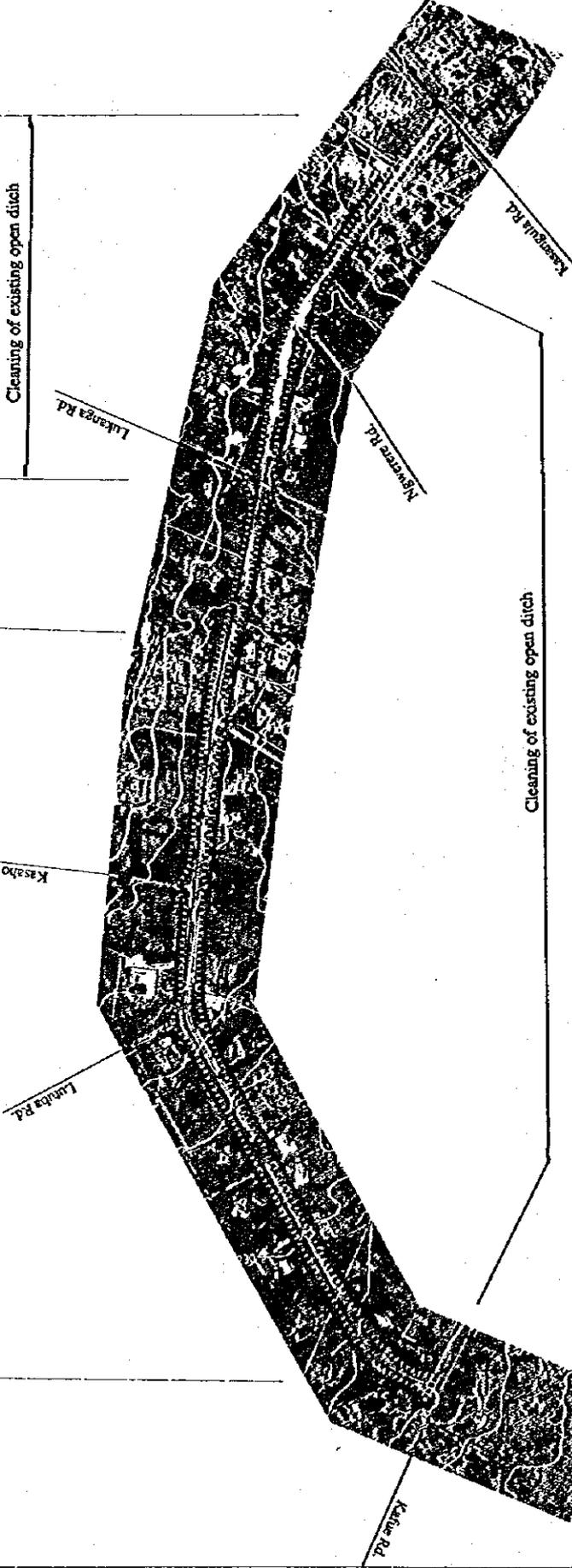


Reconstruction Section Type B-4 L=0.5 km, W=6.1 m

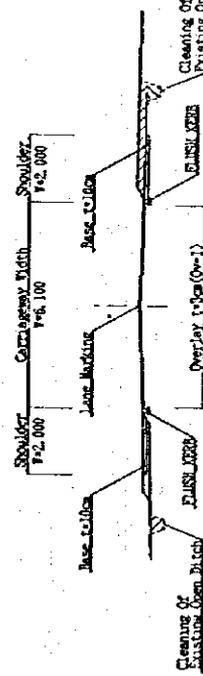
Enbankment Section H=1.0m
Pipe culvert D600 (360 degree foundation) L=75m

Overlay Section Type A-1 L=1.2 km, W=6.1 m, Overlay t=3 cm

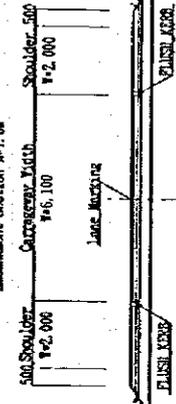
Cleaning of existing open ditch



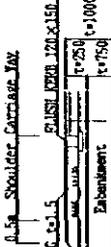
Overlay Section Type A-1



Reconstruction Section Type B-4
Enbankment Section H=1.0m



Detail of Shoulder Pavement



AS	t=50
BASE	t=100
SUB-BASE	t=100
PURCHASE	t=150

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JAPAN INTERNATIONAL
COOPERATION AGENCY

64, Mutandwa Road (1/1)
PLAN AND PROFILE

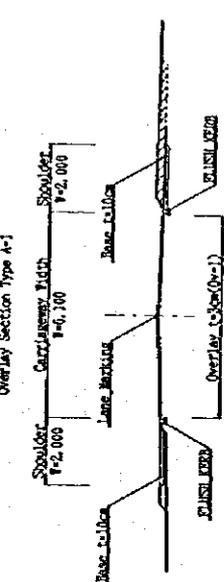
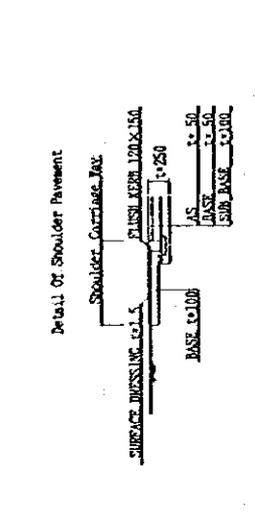
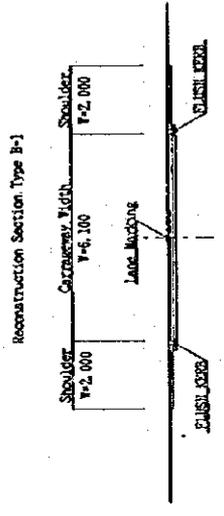
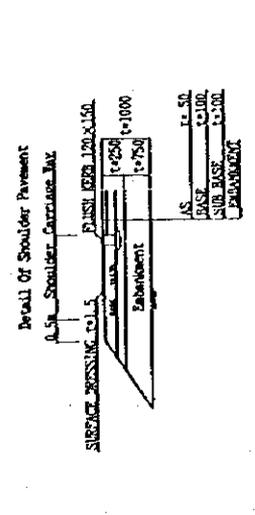
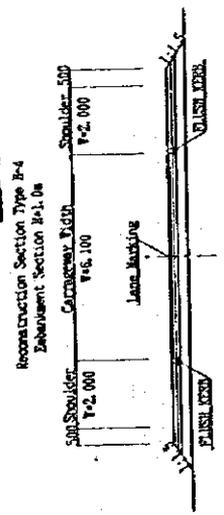
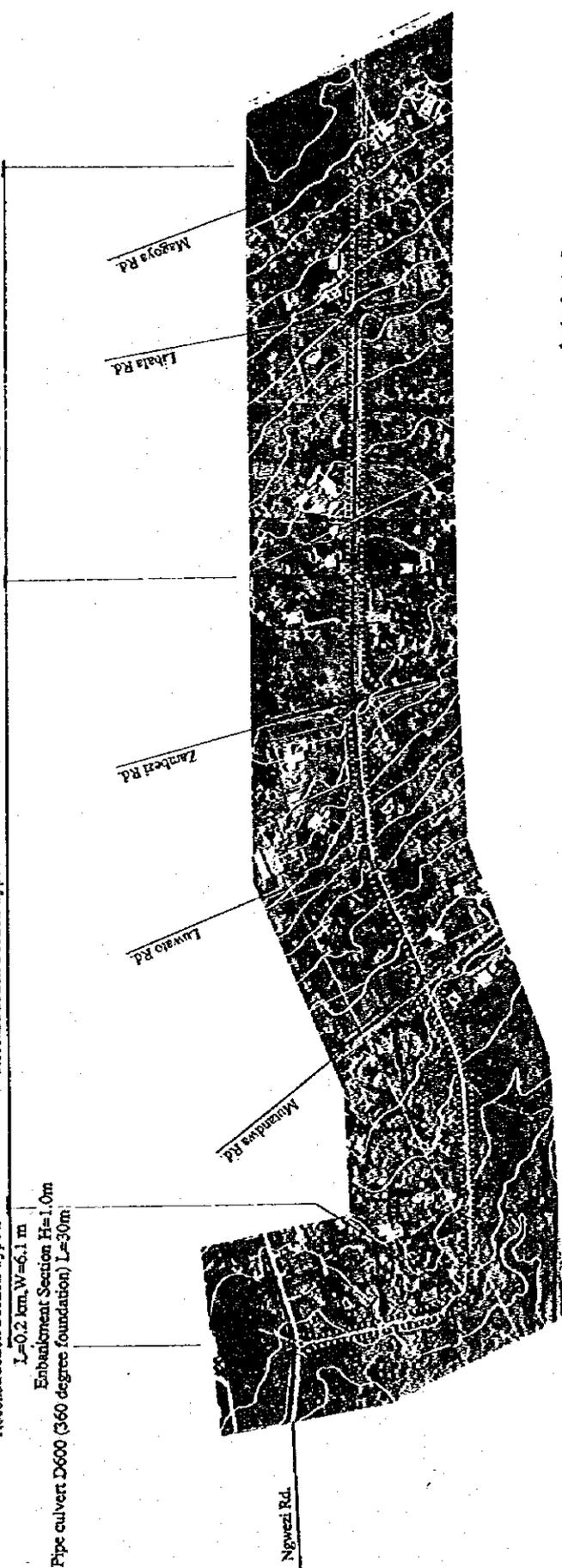
DATE
AUGUST, 1995

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16

Reconstruction Section Type B-4
 L=0.2 km, W=6.1 m
 Embankment Section H=1.0m
 Pipe culvert D600 (360 degree foundation) L=30m

Reconstruction Section Type B-1 L=0.9 km, W=6.1 m

Overlay Section Type A-1 L=0.5 km, W=6.1 m, Overlay t=3 cm



THE REPUBLIC OF ZAMBIA
 LUSAKA CITY CONCIL

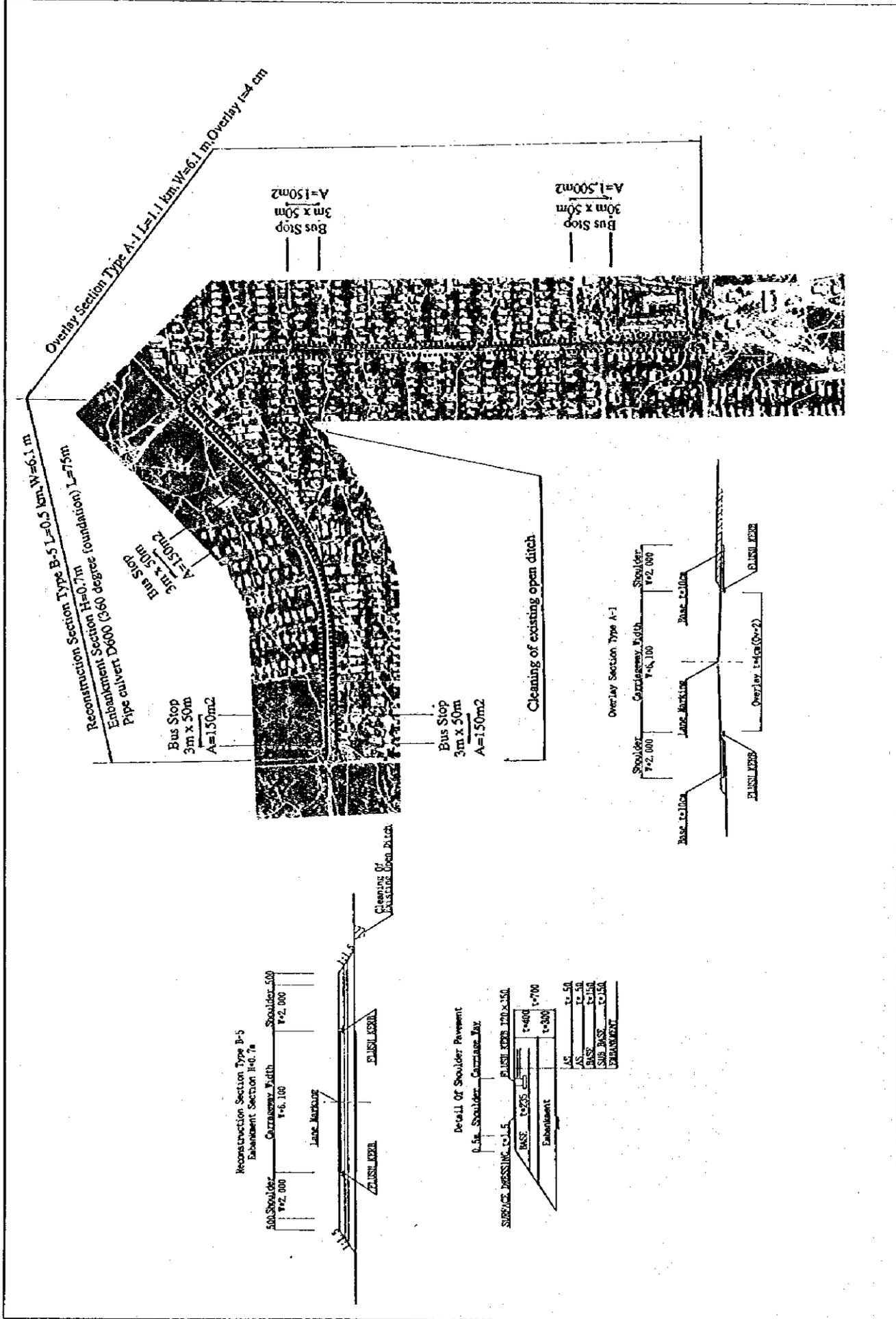
THE BASIC DESIGN STUDY ON
 THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
 OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
 COOPERATION AGENCY

66. Lulunga Road (1/1)
 PLAN AND PROFILE

DATE
 AUGUST, 1985

SHEET NO
 17

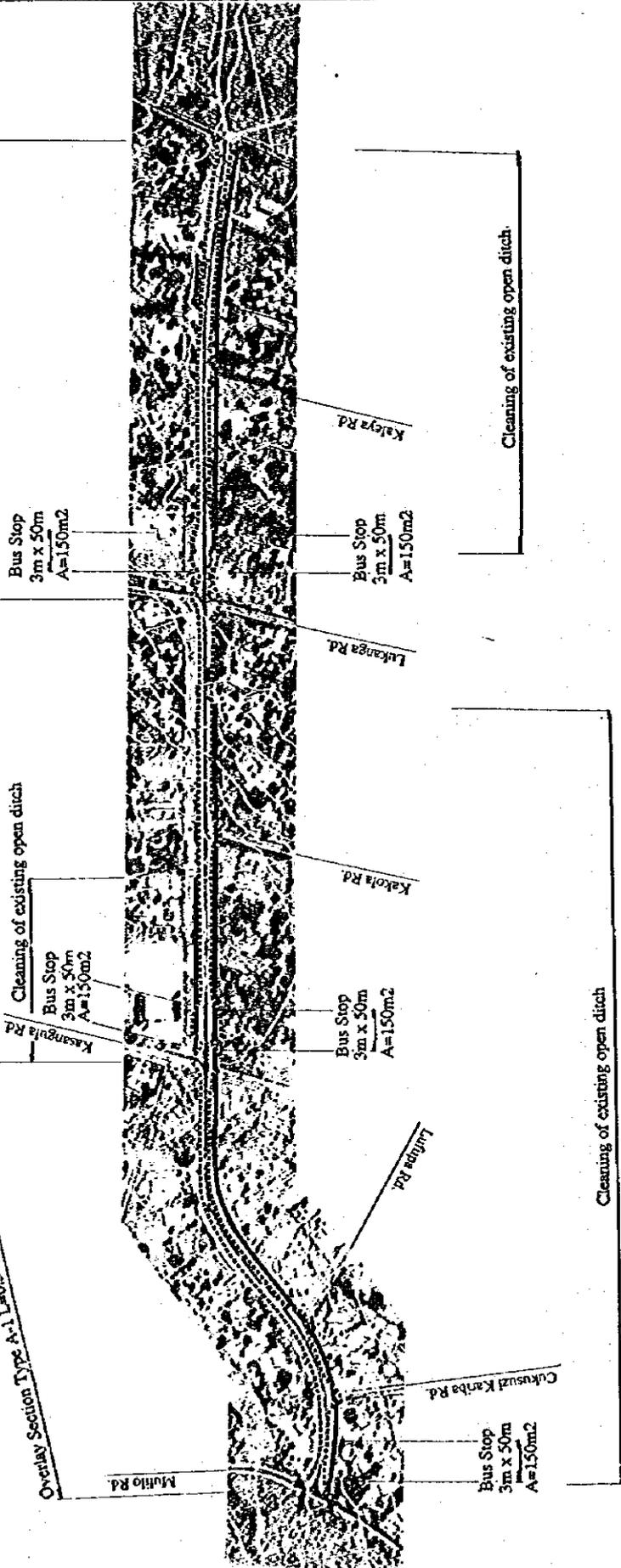


THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	75. Mtendere Road (J/1)	DATE AUGUST 1995	SHEET NO. 18
		PLAN AND PROFILE			

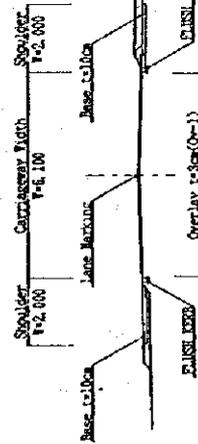
Overlay Section Type A-1 L=0.7 km, W=6.1 m, Overlay \approx 4 cm

Reconstruction Section Type B-4 L=0.5 km, W=6.1 m
 Enbankment Section H=1.0m
 Pipe culvert D600 (360 degree foundation) L=75m

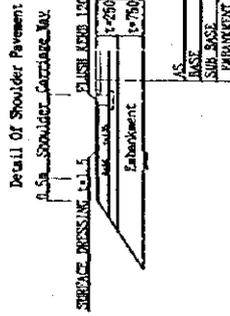
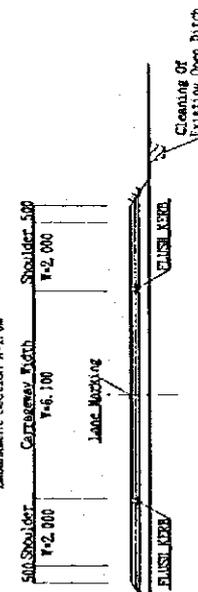
Overlay Section Type A-1 L=0.5 km, W=6.1 m, Overlay \approx 4 cm



Overlay Section Type A-1



Reconstruction Section Type B-4
 Enbankment Section H=1.0m



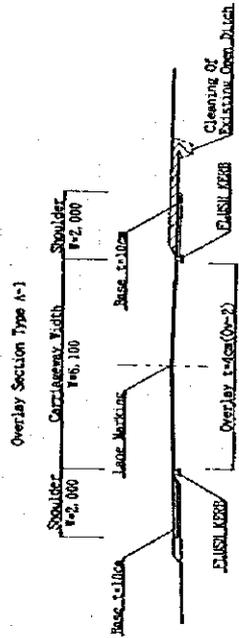
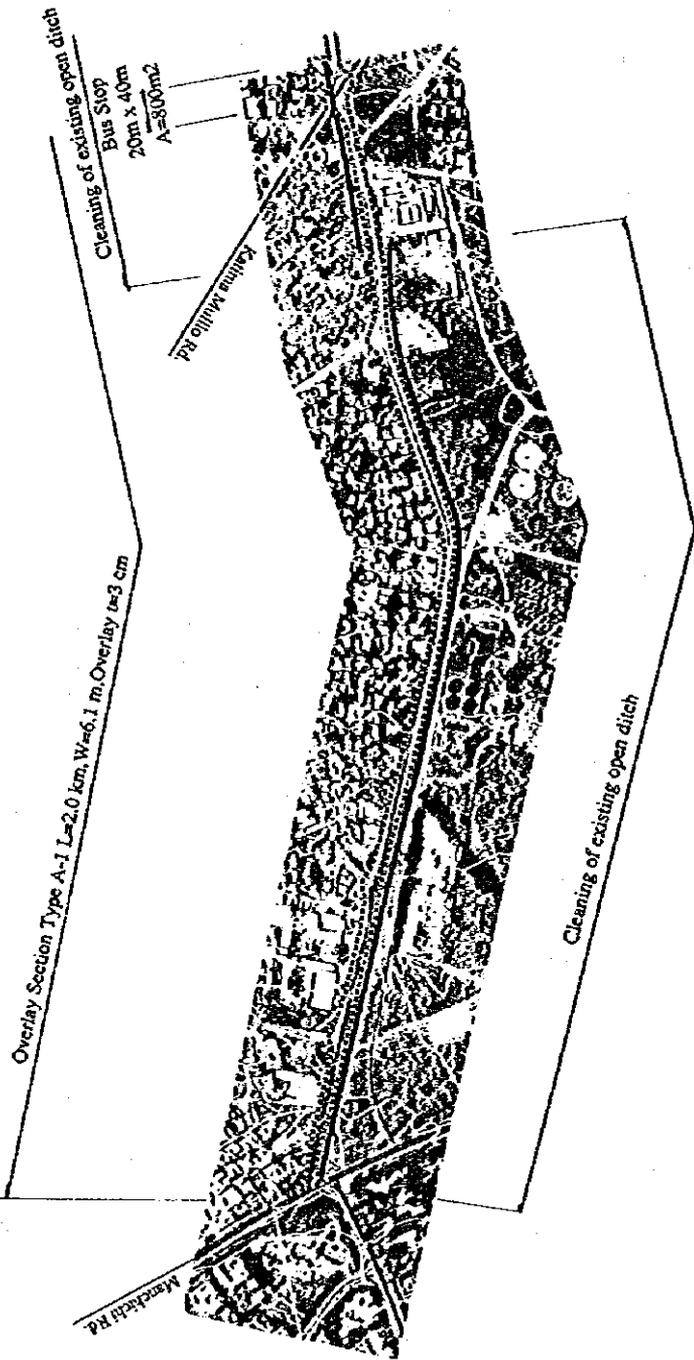
THE REPUBLIC OF ZAMBIA
 LUSAKA CITY CONCIL

THE BASIC DESIGN STUDY ON
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 OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
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102, Zambesi Road (J/1)
 PLAN AND PROFILE

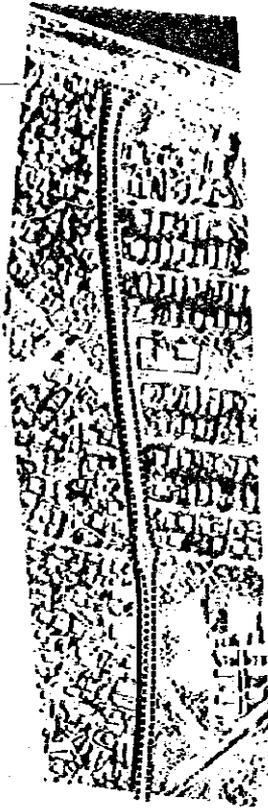
DATE AUGUST, 1995
 SHEET NO. 19



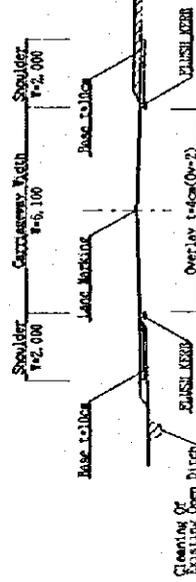
THE REPUBLIC OF ZAMBIA LUSAKA CITY COUNCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS		JAPAN INTERNATIONAL COOPERATION AGENCY	104. Garden Road(1/2)	SHEET NO
			PLAN AND PROFILE	DATE	20
				AUGUST, 1985	

Overlay Section Type A-1 L=2.0 km, W=6.1 m, Overlay t=3 cm

Cleaning of existing open ditch



Overlay Section Type A-1



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OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
COOPERATION AGENCY

104. Garden Road (2/2)
PLAN AND PROFILE

DATE
AUGUST, 1965

SHEET NO
21

Reconstruction Section Type B-1 L=1.8 km, W=6.1 m

Bus Stop
5m x 30m
A=150m²

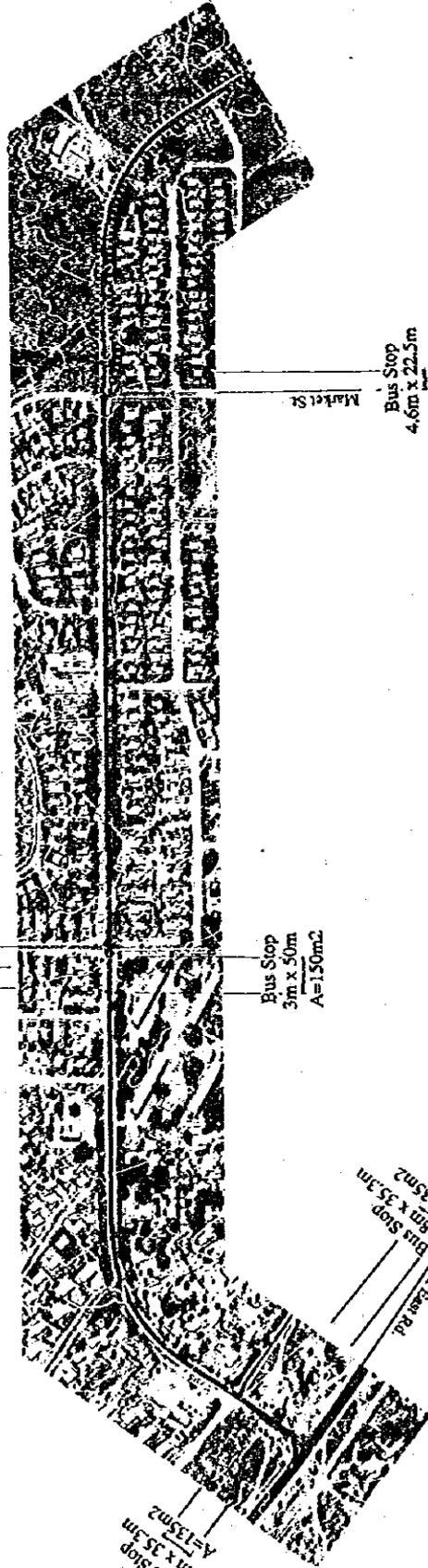
Bus Stop
7m x 30m
A=210m²

Market St
Bus Stop
4.6m x 22.5m
A=103.5m²

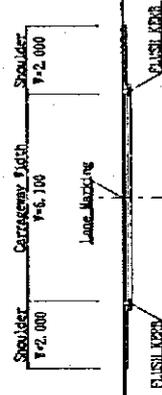
Ngwete Av
Bus Stop
3m x 50m
A=150m²

Bus Stop
3.8m x 35.3m
A=135m²

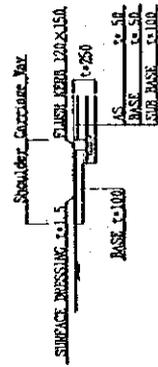
Great East Rd
Bus Stop
3.8m x 35.3m
A=135m²



Reconstruction Section Type B-1

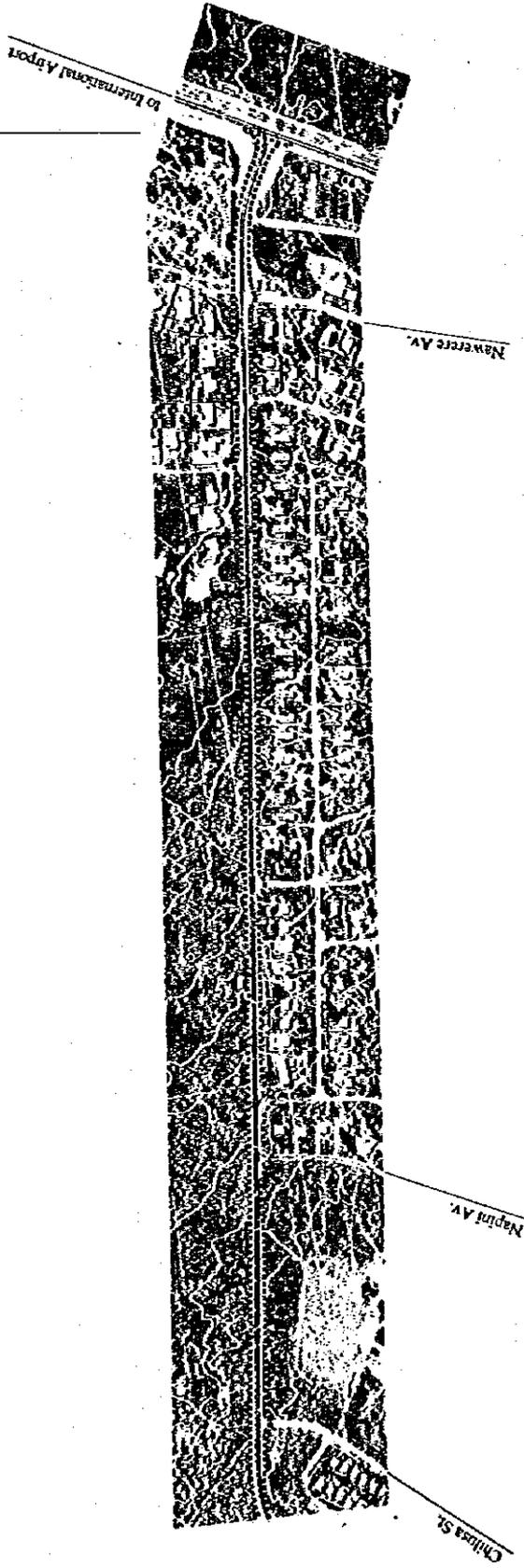


Detail of Shoulder Pavement

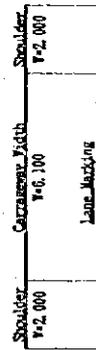


THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	33, Palm Drive(L/2) PLAN AND PROFILE	DATE AUGUST, 1995	SHEET NO. 22
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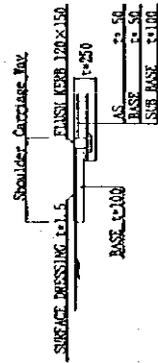
Reconstruction Section Type B-1 L=1.8 km, W=6.1 m



Reconstruction Section Type B-1



Detail of Shoulder Pavement



THE REPUBLIC OF ZAMBIA
LUSAKA CITY CONCIL

THE BASIC DESIGN STUDY ON
THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
OF LUSAKA CITY ROADS

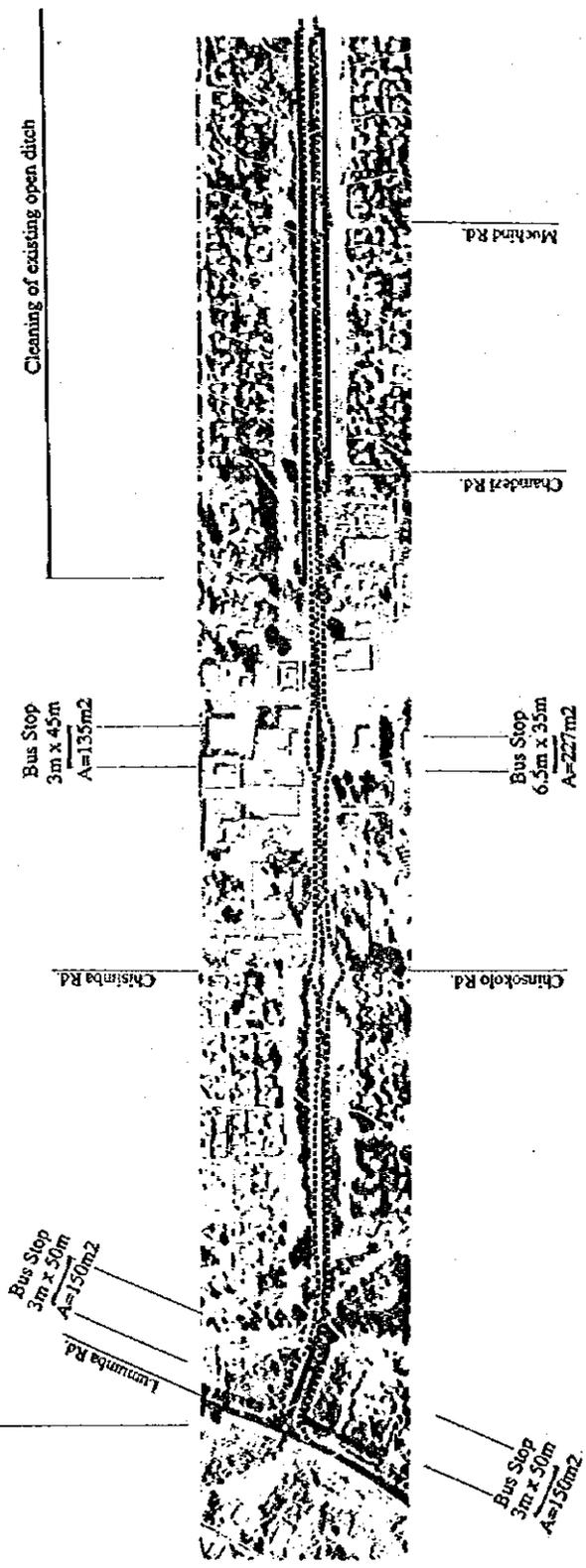
JAPAN INTERNATIONAL
COOPERATION AGENCY

33. Palm Drive(2/2)
PLAN AND PROFILE

DATE
AUGUST 1995

SHEET NO
23

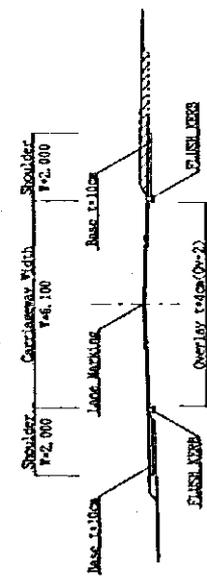
Overlay Section Type A-1 L=2.9 km, W=6.1 m, Overlay t=4 cm.



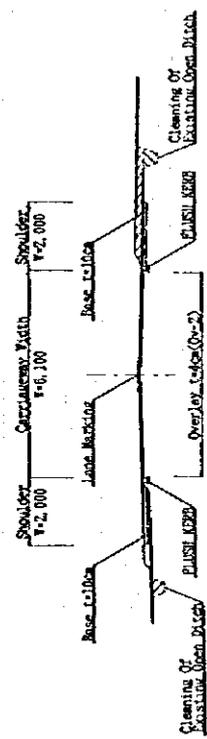
Cleaning of existing open ditch

Cleaning of existing open ditch

Overlay Section Type A-1



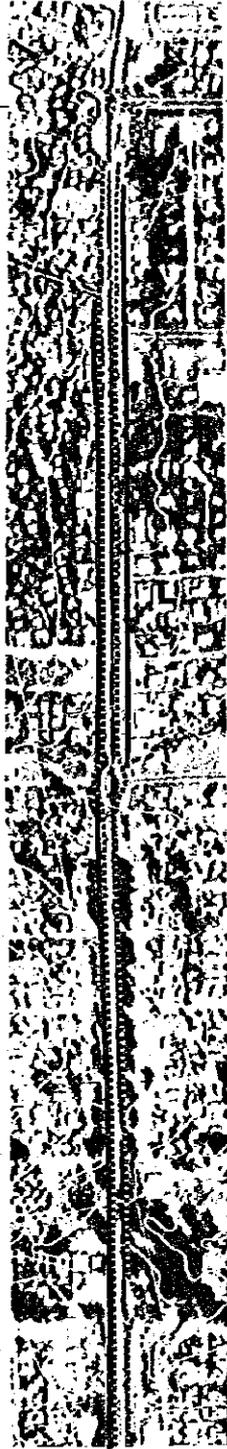
Overlay Section Type A-1



Overlay Section Type A-1 L=2.9 km, W=6.1 m, Overlay t=4 cm

Cleaning of existing open ditch

Bus Stop
20m x 60m
A=1,200m²

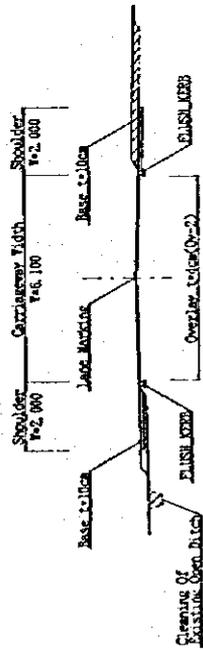


Bus Stop
12m x 60m
A=720m²

Impala Rd

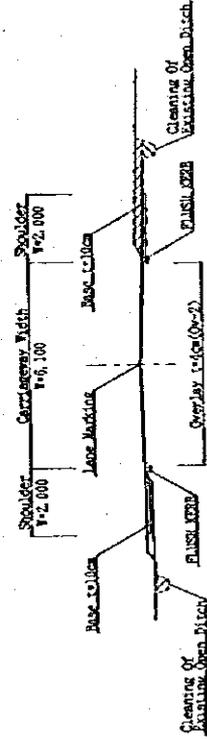
Chianda Rd

Overlay Section Type A-1

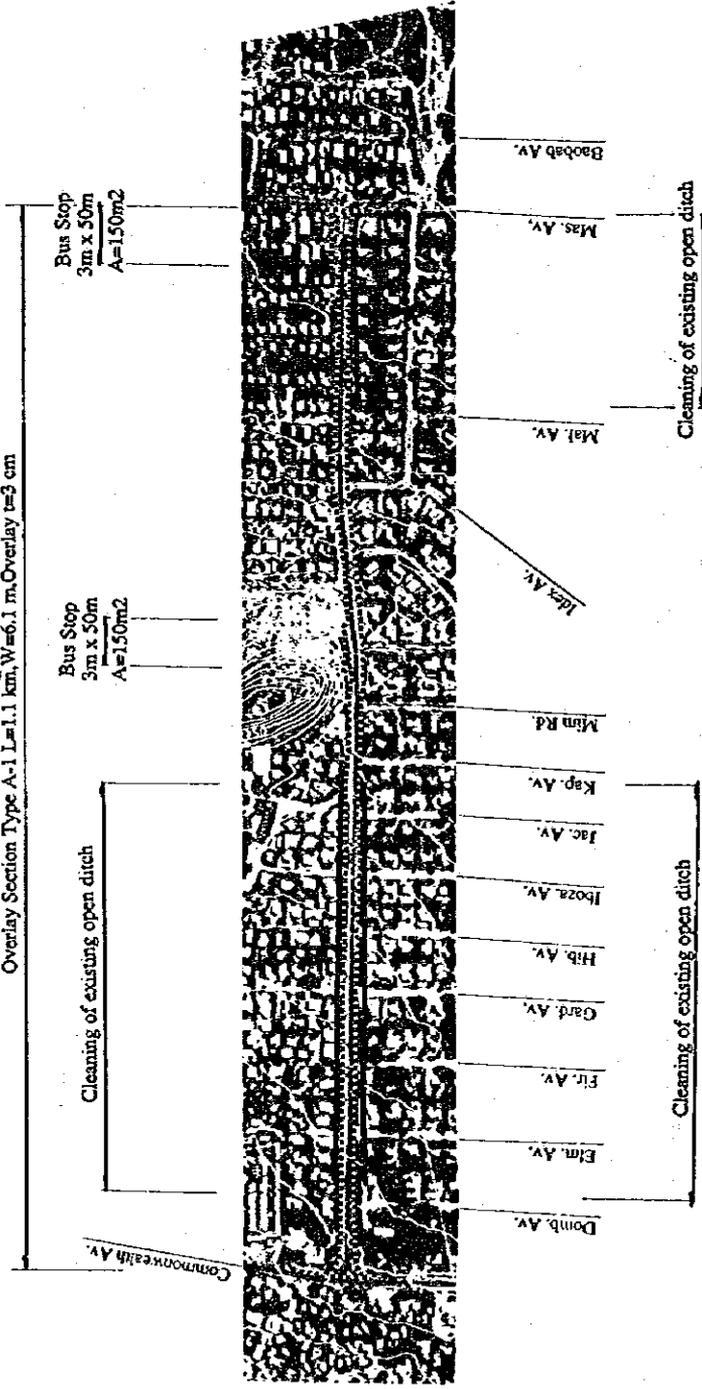


Cleaning of existing open ditch

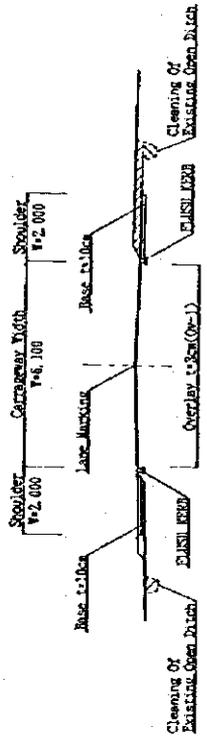
Overlay Section Type A-1



Overlay Section Type A-1 L=1.1 km, W=6.1 m, Overlay $t=3$ cm



Overlay Section Type A-1



THE REPUBLIC OF ZAMBIA
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THE BASIC DESIGN STUDY ON
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JAPAN INTERNATIONAL
COOPERATION AGENCY

122. Antelope Avenue(I/I)
PLAN AND PROFILE

DATE
AUGUST, 1995

SHEET NO
26

Overlay Section Type A-5
 L=1.0 km, W=27.9 m, Overlay 104 cm
 Sidewalk L=1.0 km, W=7.8 m

Ben Bella Rd.

Kanjiya Rd.

Katondo Rd.

Nkwazi Rd.

Chipamba Rd.

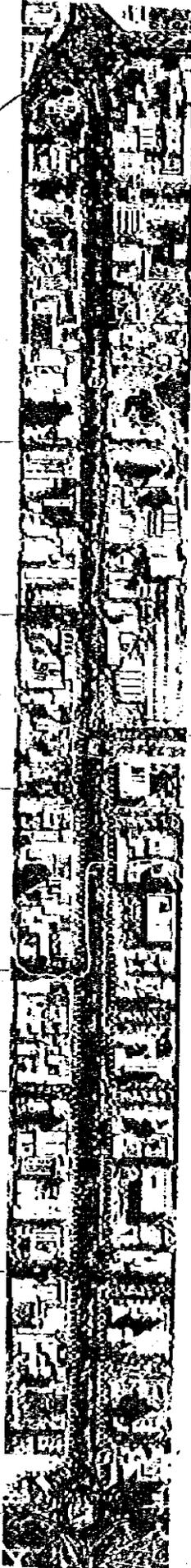
Kalundwe Rd.

Katasha Rd.

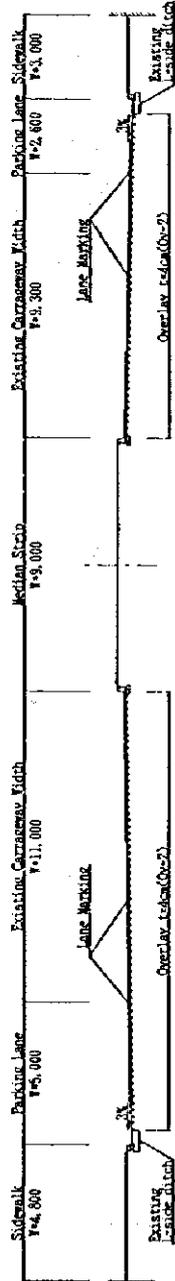
Kalundwe Rd.

Church Rd.

Great East Rd.



Overlay Section Type A-5



THE REPUBLIC OF ZAMBIA
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THE BASIC DESIGN STUDY ON
 THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
 OF LUSAKA CITY ROADS

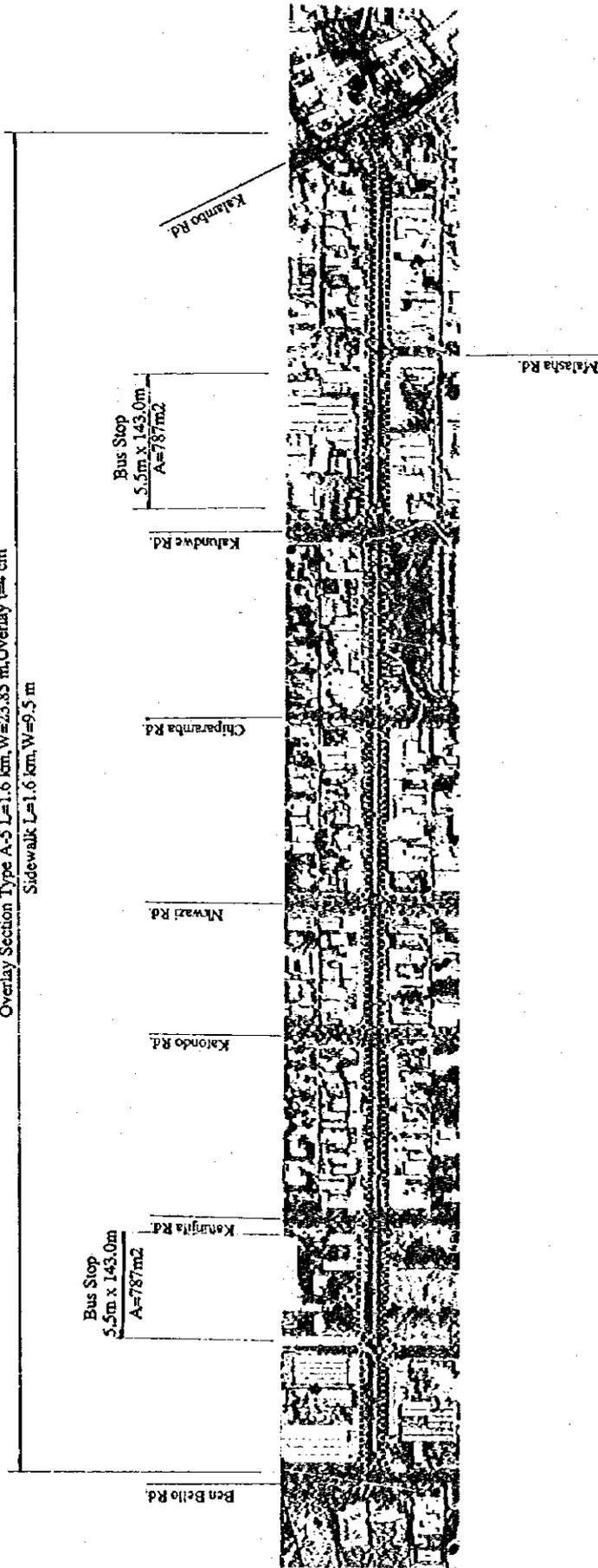
JAPAN INTERNATIONAL
 COOPERATION AGENCY

4. Cairo Road(1/1)
 PLAN AND PROFILE

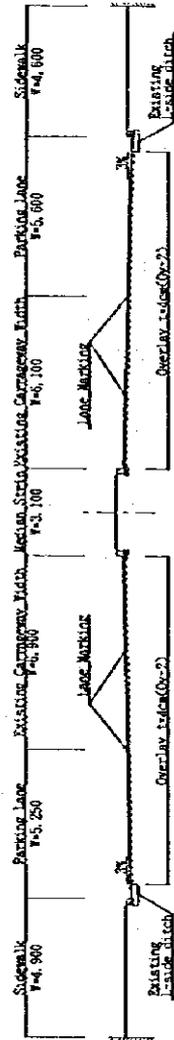
DATE
 AUGUST, 1995

SHEET NO
 27

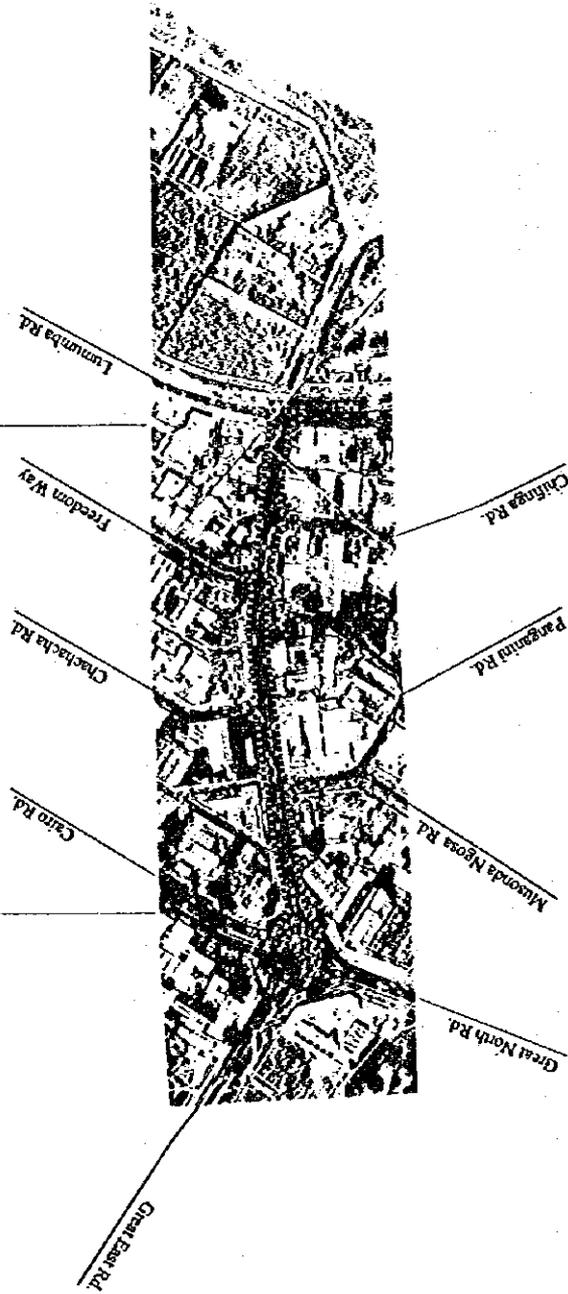
Overlay Section Type A-5 L=1.6 km, W=23.85 m, Overlay t=4 cm
 Sidewalk L=1.6 km, W=9.5 m



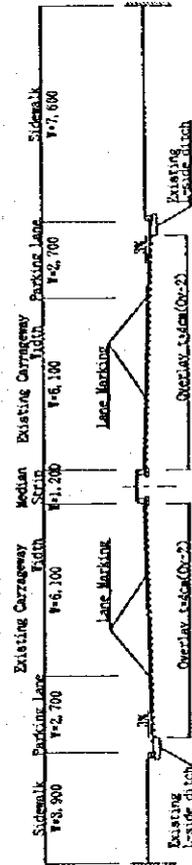
Overlay Section Type A-5



Overlay Section Type A-5 L=0.7 km, W=17.6 m, Overlay t=4 cm
 Sidewalk L=0.7 km, W=11.5 m



Overlay Section Type A-5



THE REPUBLIC OF ZAMBIA
 LUSAKA CITY COUNCIL

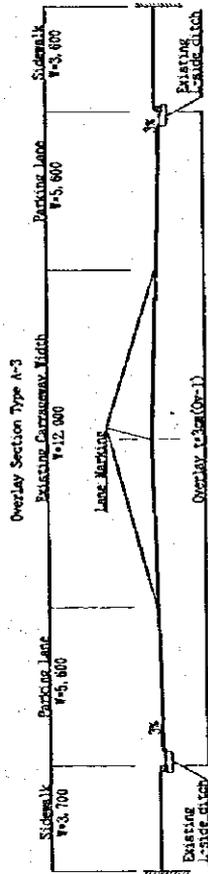
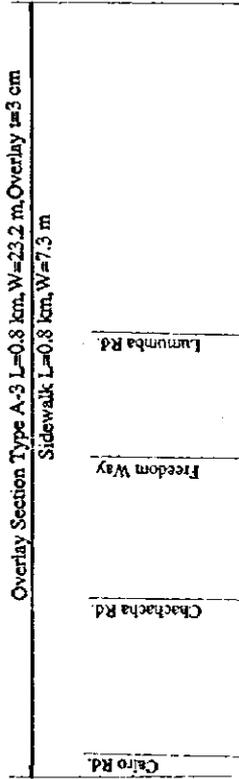
THE BASIC DESIGN STUDY ON
 THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
 OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
 COOPERATION AGENCY

7. Kalamba Road (J/A)
 PLAN AND PROFILE

DATE
 AUGUST, 1996

SHEET NO
 29



THE REPUBLIC OF ZAMBIA
 LUSAKA CITY COUNCIL

THE BASIC DESIGN STUDY ON
 THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
 OF LUSAKA CITY ROADS

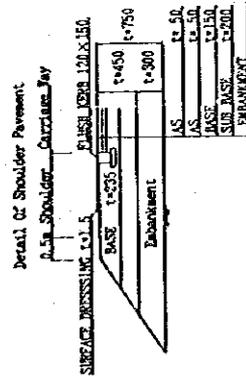
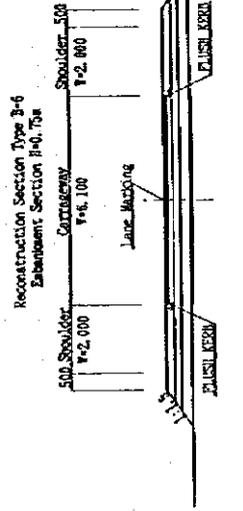
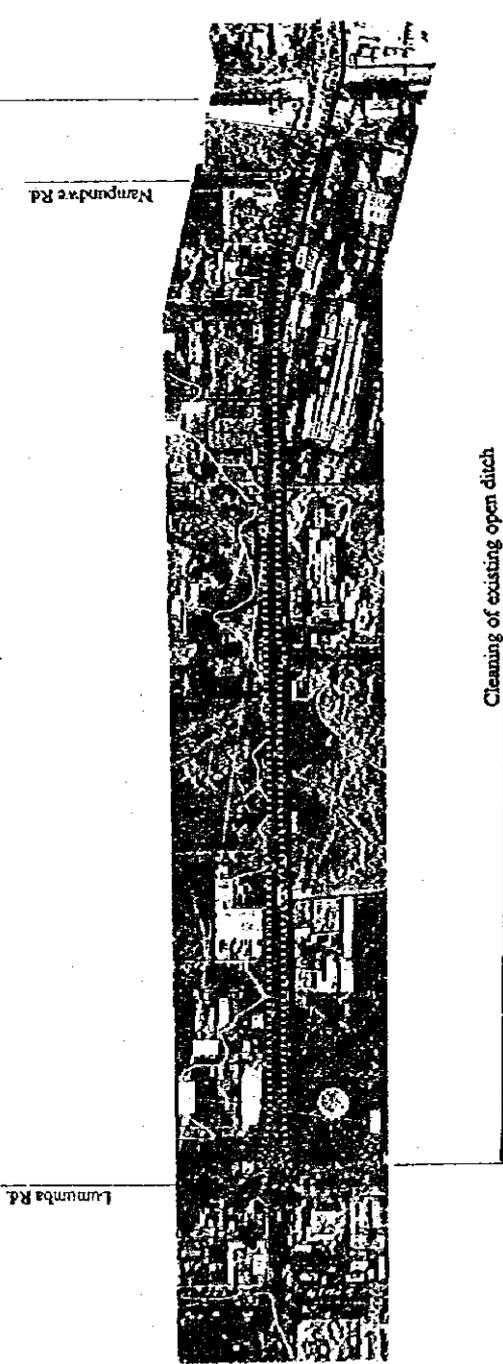
JAPAN INTERNATIONAL
 COOPERATION AGENCY

9. Kalundwe Road (1/1)
 PLAN AND PROFILE

DATE
 AUGUST, 1995

SHEET NO.
 30

Reconstruction Section Type B-6 L=1.2 km, W=6.1m
 Embankment Section H=0.75m
 Pipe culvert D600 (360 degree foundation) L=180m



THE REPUBLIC OF ZAMBIA
 LUSAKA CITY CONCIL

THE BASIC DESIGN STUDY ON
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 OF LUSAKA CITY ROADS

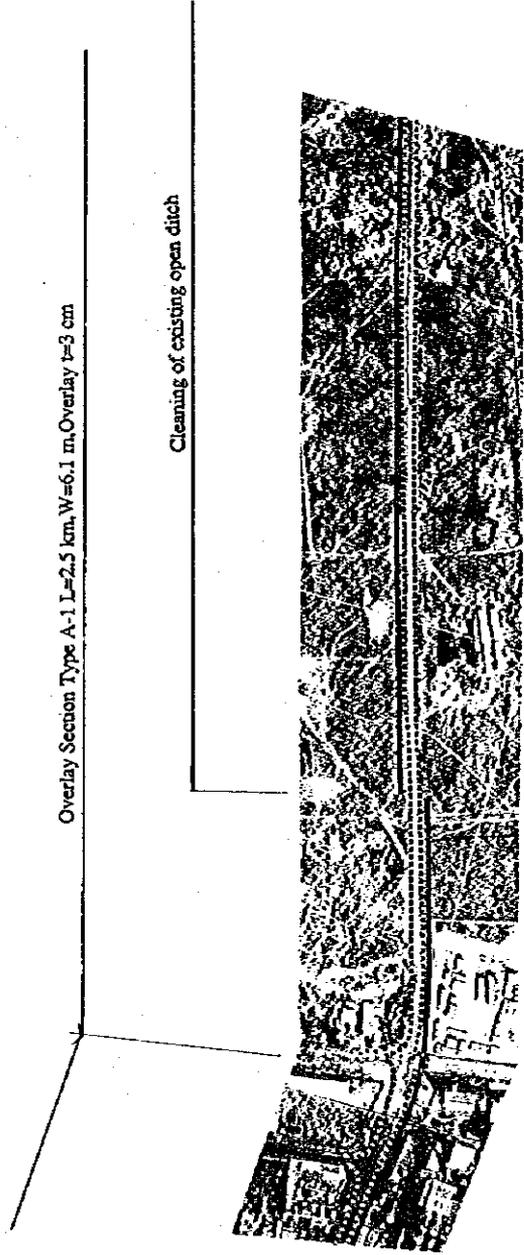
JAPAN INTERNATIONAL
 COOPERATION AGENCY

20. Mumbwa Road(1/3)
 PLAN AND PROFILE

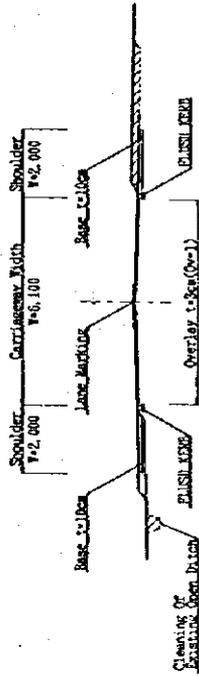
DATE
 AUGUST 1995

SHEET NO.
31

Overlay Section Type A-1 L=2.5 km, W=6.1 m, Overlay t=3 cm



Overlay Section Type A-1



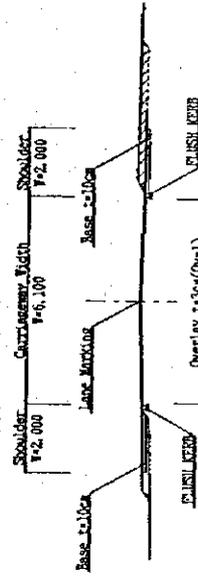
THE REPUBLIC OF ZAMBIA LUSAKA CITY COUNCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	20. Mumbwa Road(2/3) PLAN AND PROFILE	DATE AUGUST, 1995	SHEET NO 32

Overlay Section Type A-1 L=2.5 km, W=6.1 m, Overlay t=3 cm

Cleaning of existing open ditch



Overlay Section Type A-1



THE REPUBLIC OF ZAMBIA
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THE BASIC DESIGN STUDY ON
THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
OF LUSAKA CITY ROADS

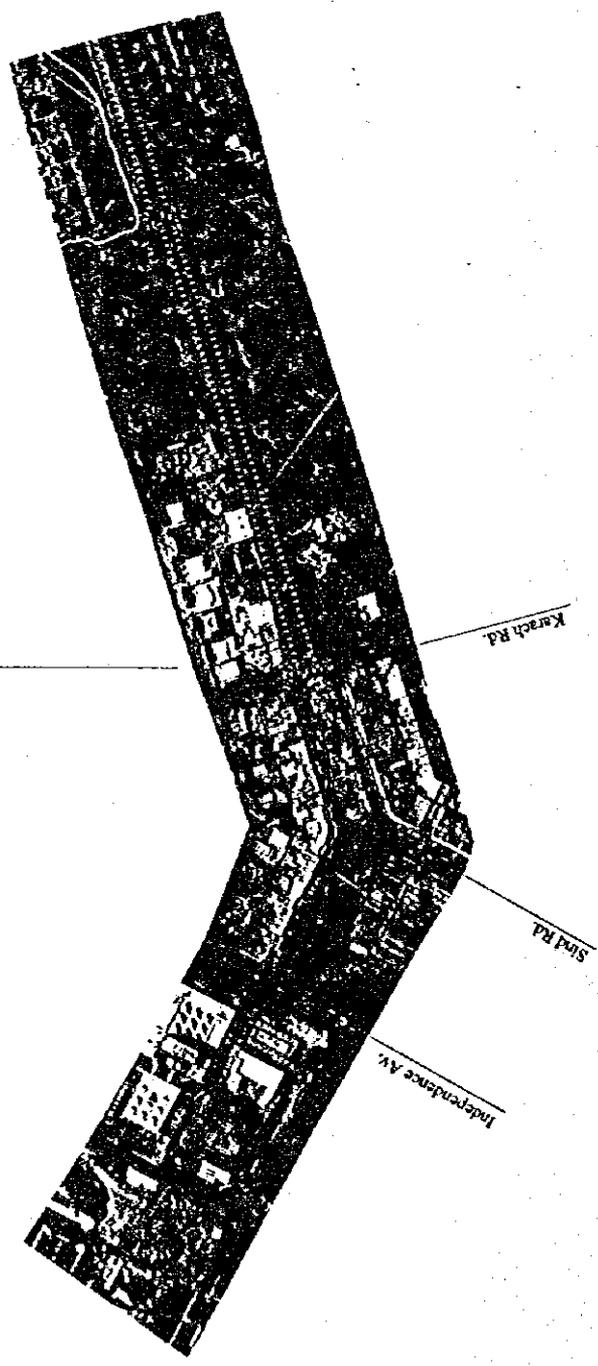
JAPAN INTERNATIONAL
COOPERATION AGENCY

20. Mumbwa Road(3/3)
PLAN AND PROFILE

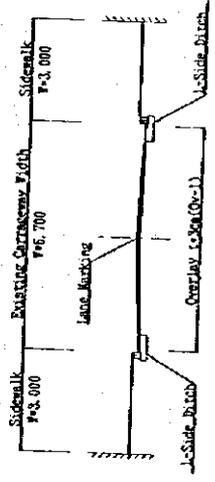
DATE
AUGUST, 1985

SHEET NO
33

Overlay Section Type A-6
 Sidewalk 1.5m
 Existing Carriageway Width 7.0m
 Lane Marking 3.0m
 Overlay 1.5m (0.0-1)



Overlay Section Type A-6



THE REPUBLIC OF ZAMBIA
 LUSAKA CITY CONCIL

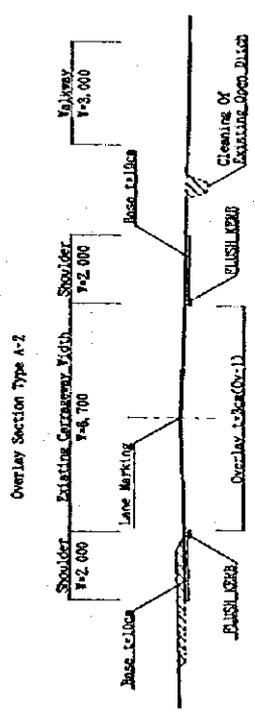
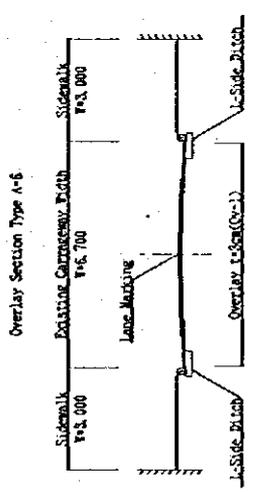
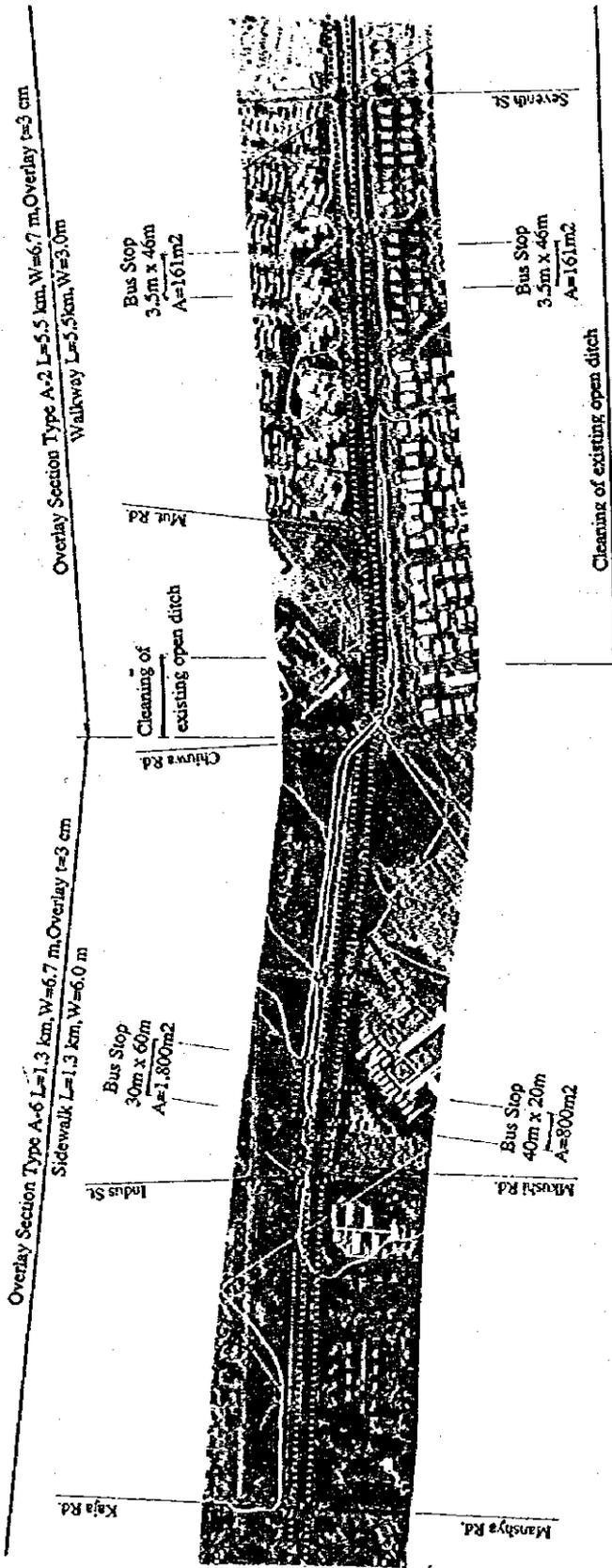
THE BASIC DESIGN STUDY ON
 THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
 OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
 COOPERATION AGENCY

24. Chilumbulu Road(1/5)
 PLAN AND PROFILE

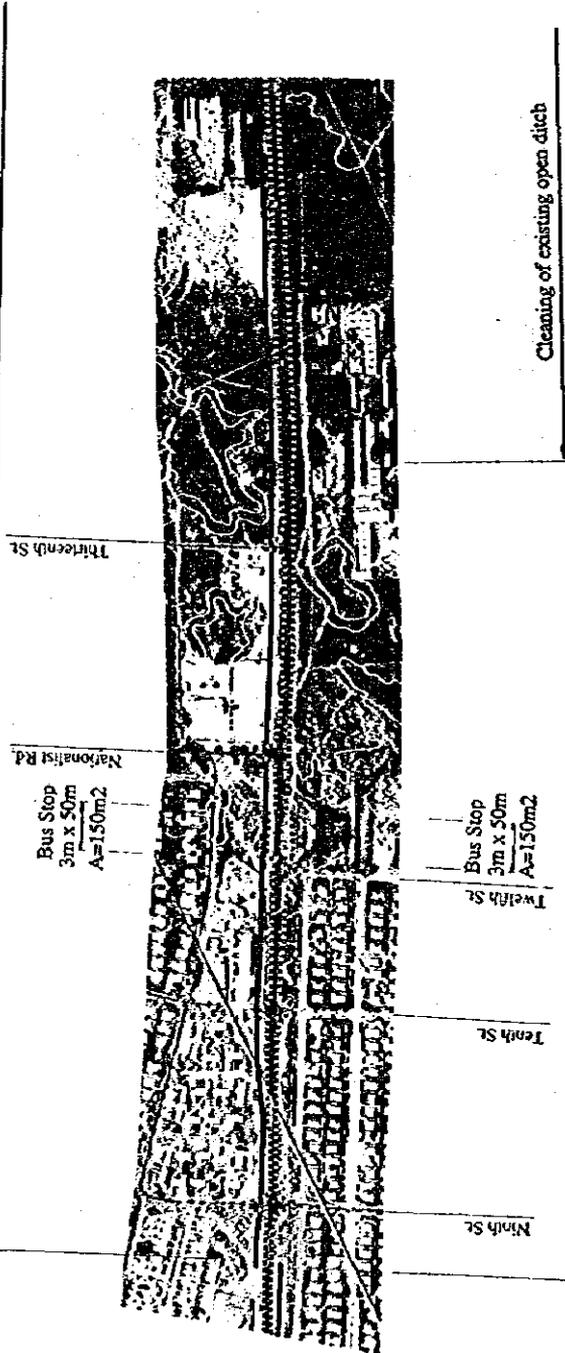
DATE
 AUGUST, 1985

SHEET NO
 34

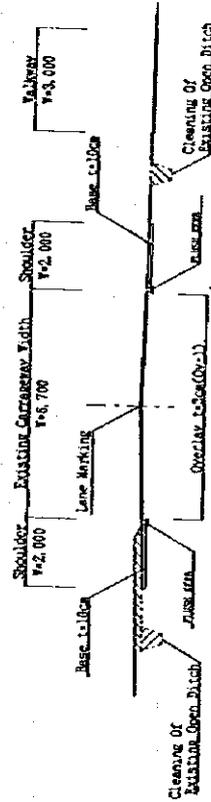


Overlay Section Type A-2 L=5.5 km, W=6.7 m, Overlay t=3 cm
 Walkway L=5.5km, W=3.0m

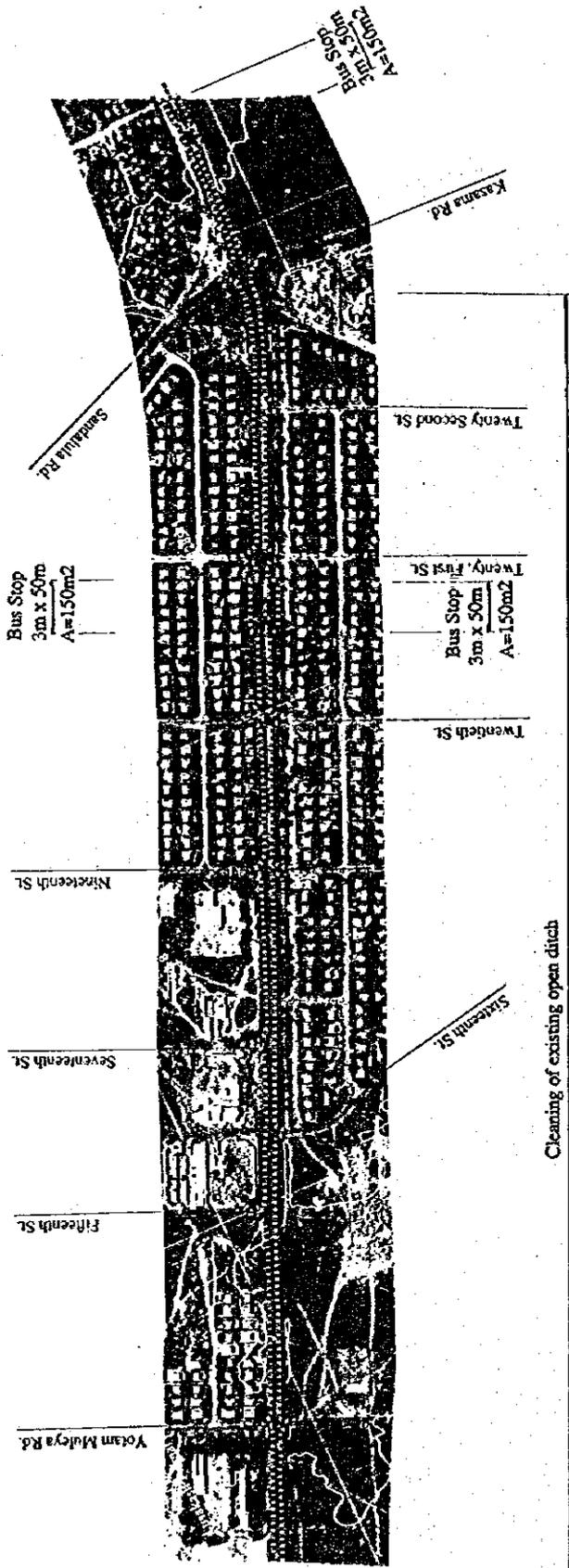
Cleaning of existing open ditch



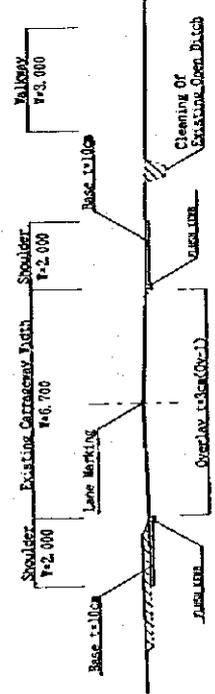
Overlay Section Type A-2



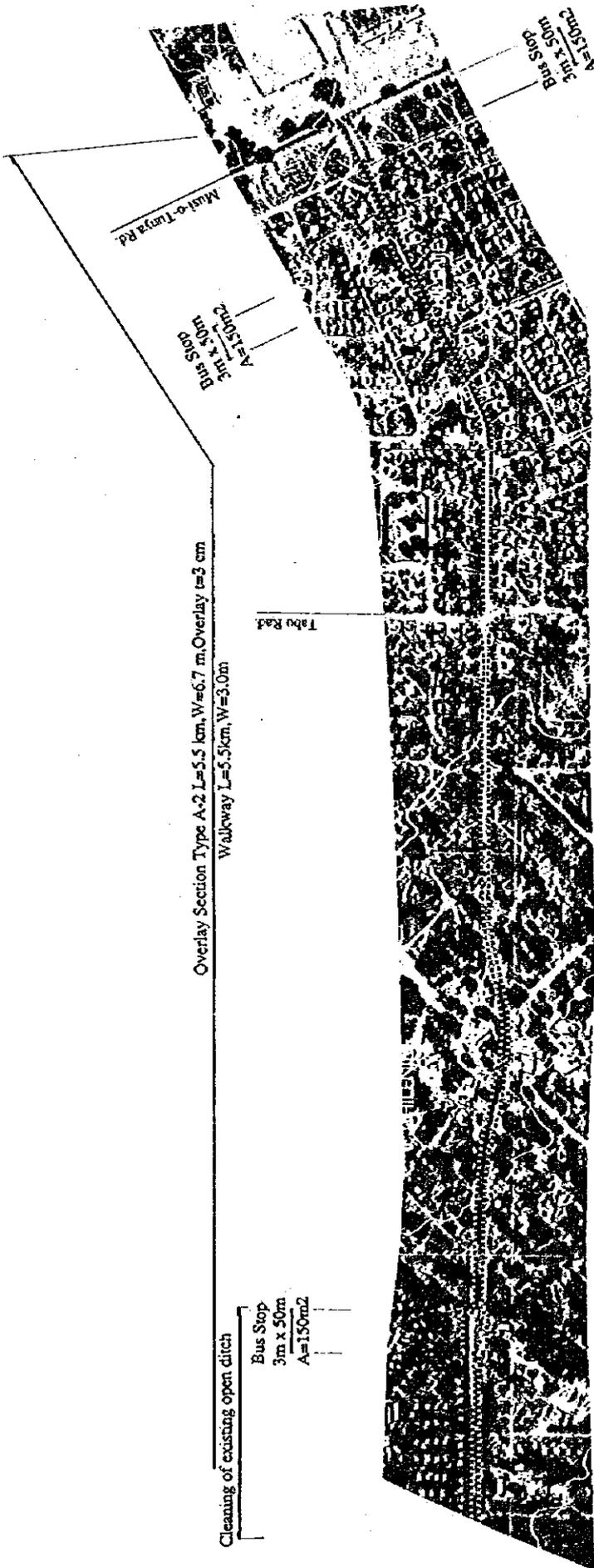
Overlay Section Type A-2 L=5.5 km, W=6.7 m, Overlay t=3 cm,
Walkway L=5.5 km, W=5.0m



Overlay Section Type A-2



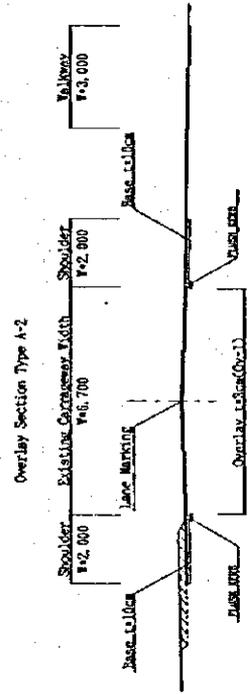
THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	24. Chitumbulu Road(4/S) PLAN AND PROFILE	DATE AUGUST, 1995	SHEET NO 37
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Overlay Section Type A-2 L=5.5 km, W=6.7 m, Overlay = 3 cm
 Walkway L=5.5 km, W=3.0 m

Cleaning of existing open ditch
 Bus Stop
 3m x 50m
 A=150m²

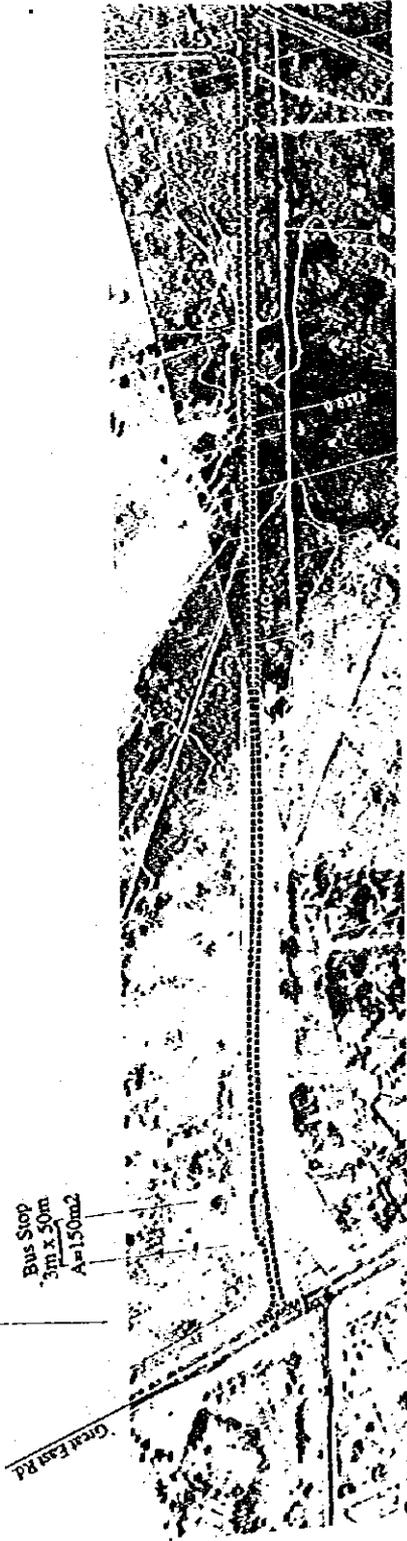
Bus Stop
 3m x 50m
 A=150m²



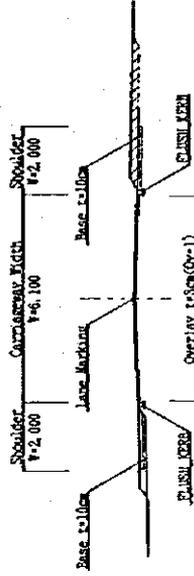
Overlay Section Type A-2

THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	24. Chitumbulu Road(S/S) PLAN AND PROFILE DATE AUGUST, 1985 SHEET NO 38
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Overlay Section Type A-1 L=2.5 km, W=6.1 m, Overlay t=3 cm



Overlay Section Type A-1



THE REPUBLIC OF ZAMBIA
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THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
COOPERATION AGENCY

26. Kalingalinga Road(1/2)

DATE

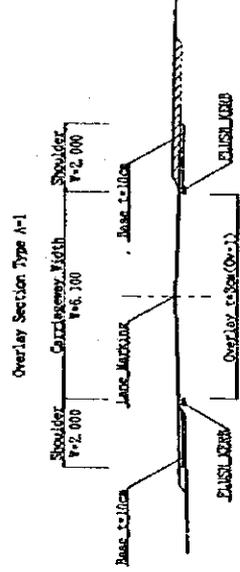
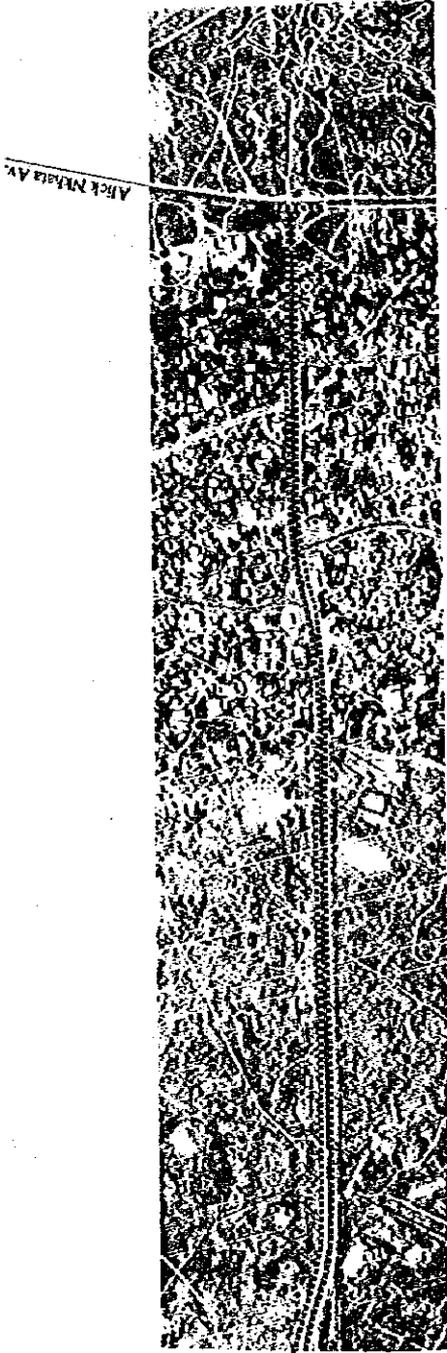
SHEET NO

AUGUST, 1995

PLAN AND PROFILE

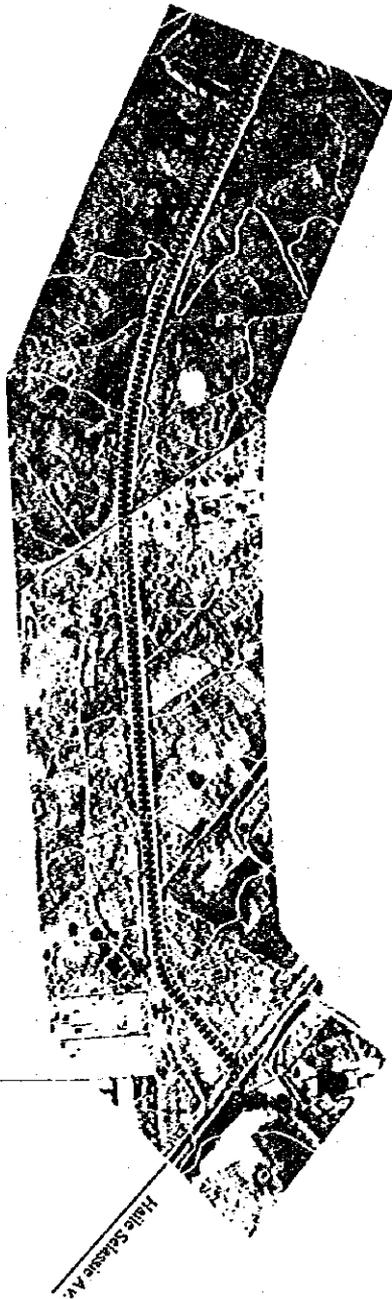
39

Overlay Section Type A-1 L=2.5 km, W=6.1 m, Overlay t=3 cm

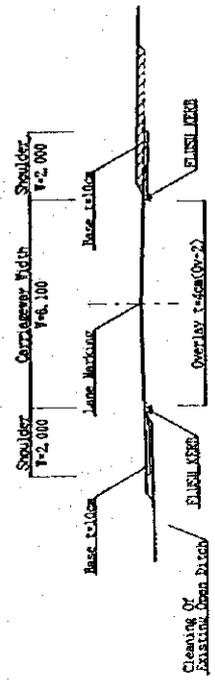


THE REPUBLIC OF ZAMBIA LUSAKA CITY COUNCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	26. Kaingalinga Road(2/2) PLAN AND PROFILE DATE: AUGUST, 1985 SHEET NO. 40
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Overlay Section Type A-1 L=1.5 km, W=6.1 m, Overlay t=4 cm



Overlay Section Type A-1



THE REPUBLIC OF ZAMBIA
LUSAKA CITY COUNCIL

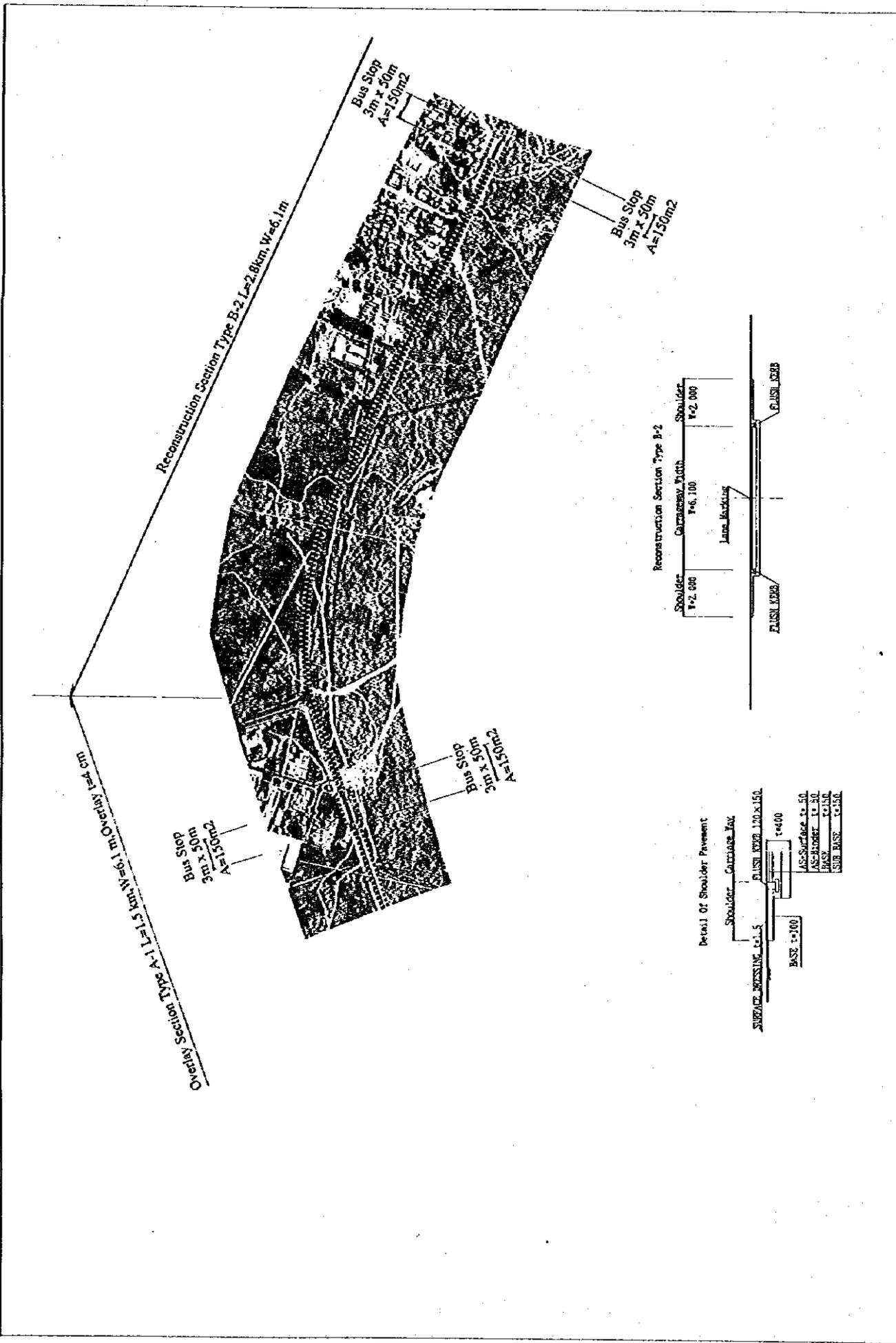
THE BASIC DESIGN STUDY ON
THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
COOPERATION AGENCY

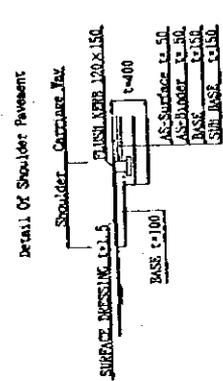
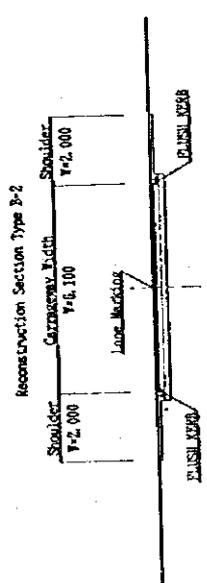
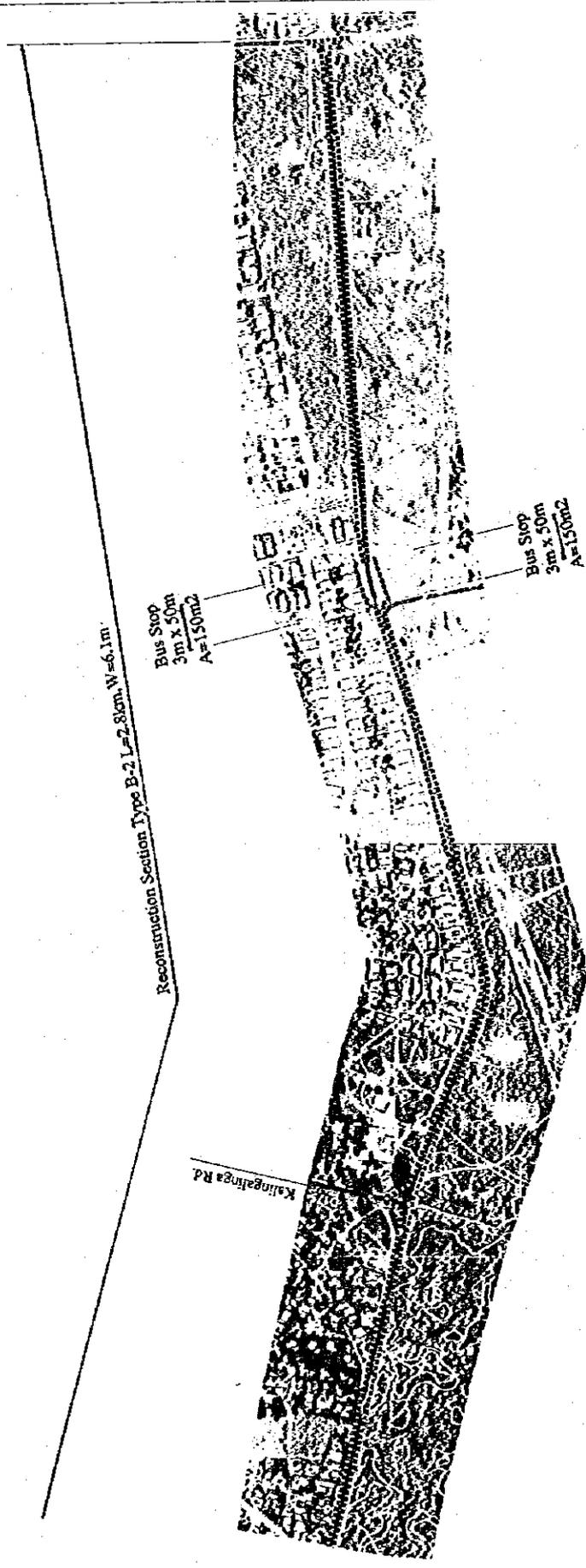
27. Alick Nikata Road (1/3)
PLAN AND PROFILE

DATE
AUGUST, 1995

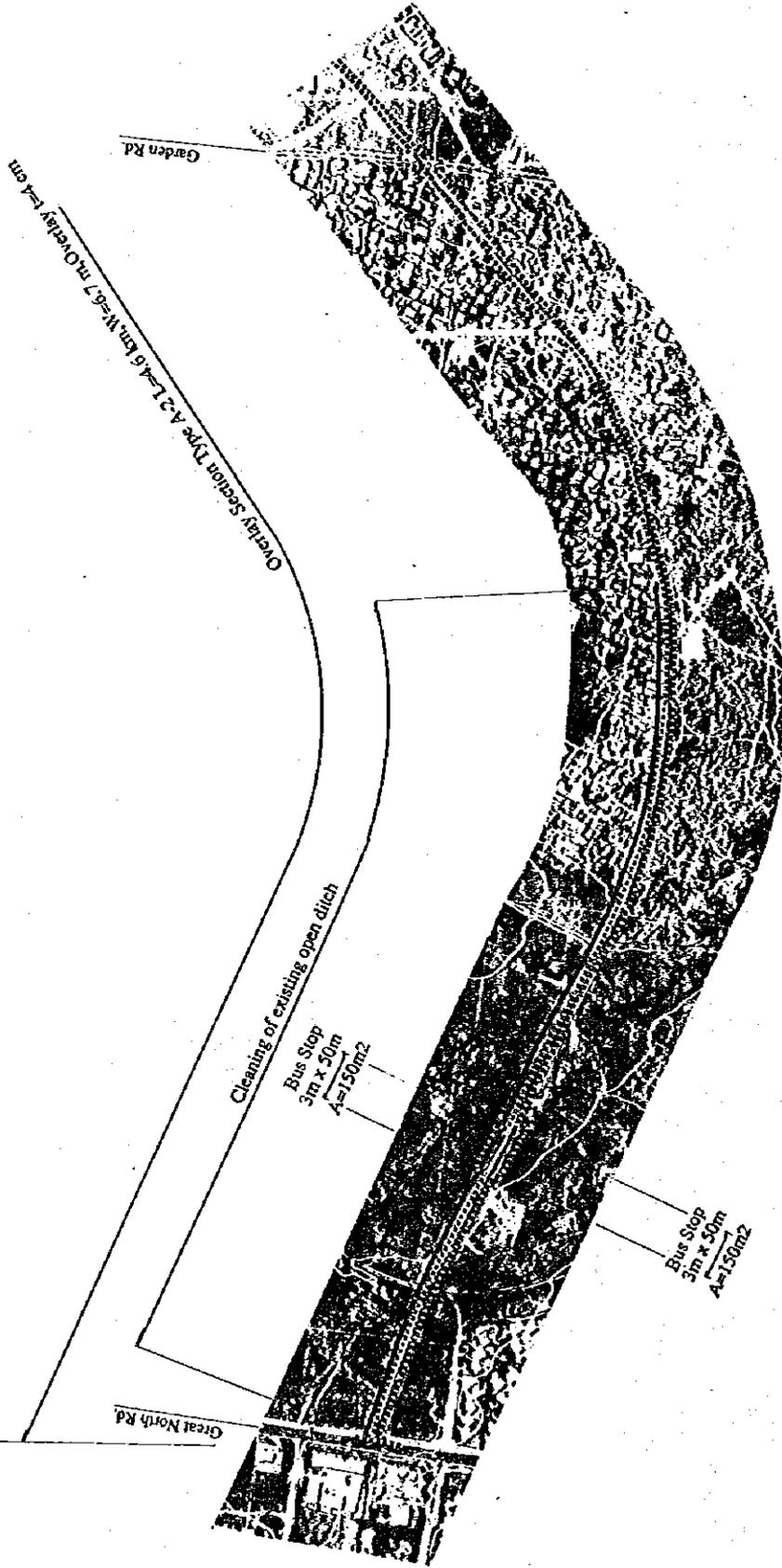
SHEET NO
41



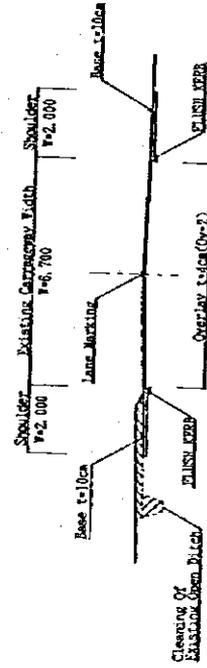
THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	27. Alick Nikata Road(2/3) PLAN AND PROFILE DATE AUGUST, 1995 SHEET NO 42
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THE REPUBLIC OF ZAMBIA LUSAKA CITY COUNCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	27. Alick Nkata Road (3/3)	DATE	SHEET NO
				AUGUST 1995	43
				PLAN AND PROFILE	

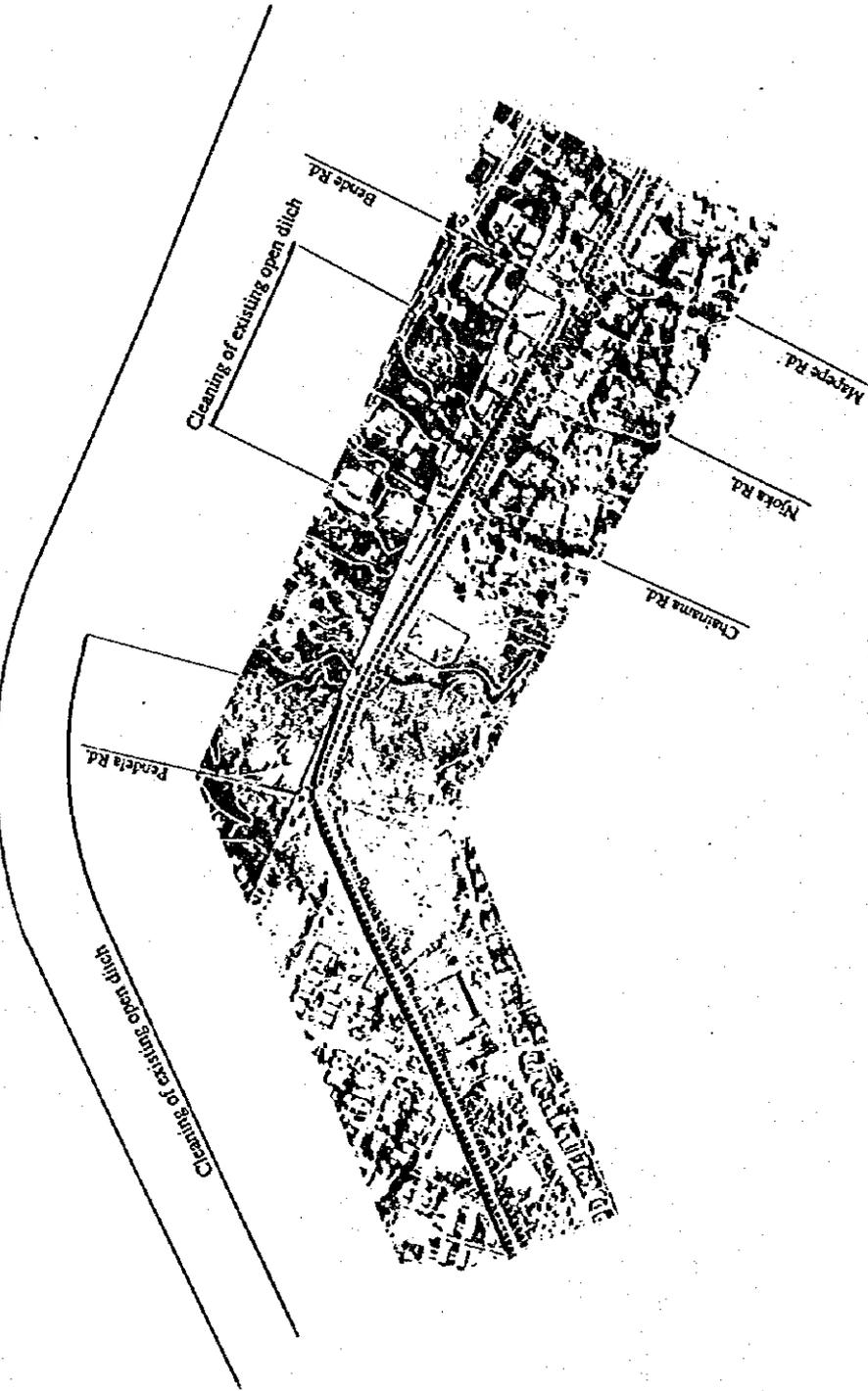


Overlay Section Type A-2

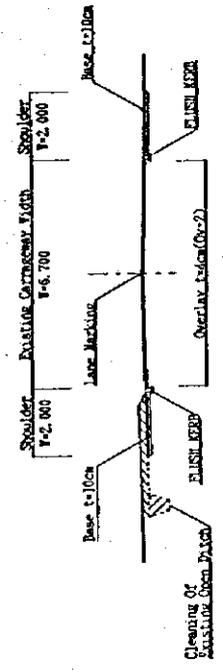


THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	35. Katima Mulilo Road (1/3) PLAN AND PROFILE DATE: AUGUST, 1995 SHEET NO: 44
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Overlay Section Type A-2 L=4.6 km, W=6.7 m, Overlay t=4 cm

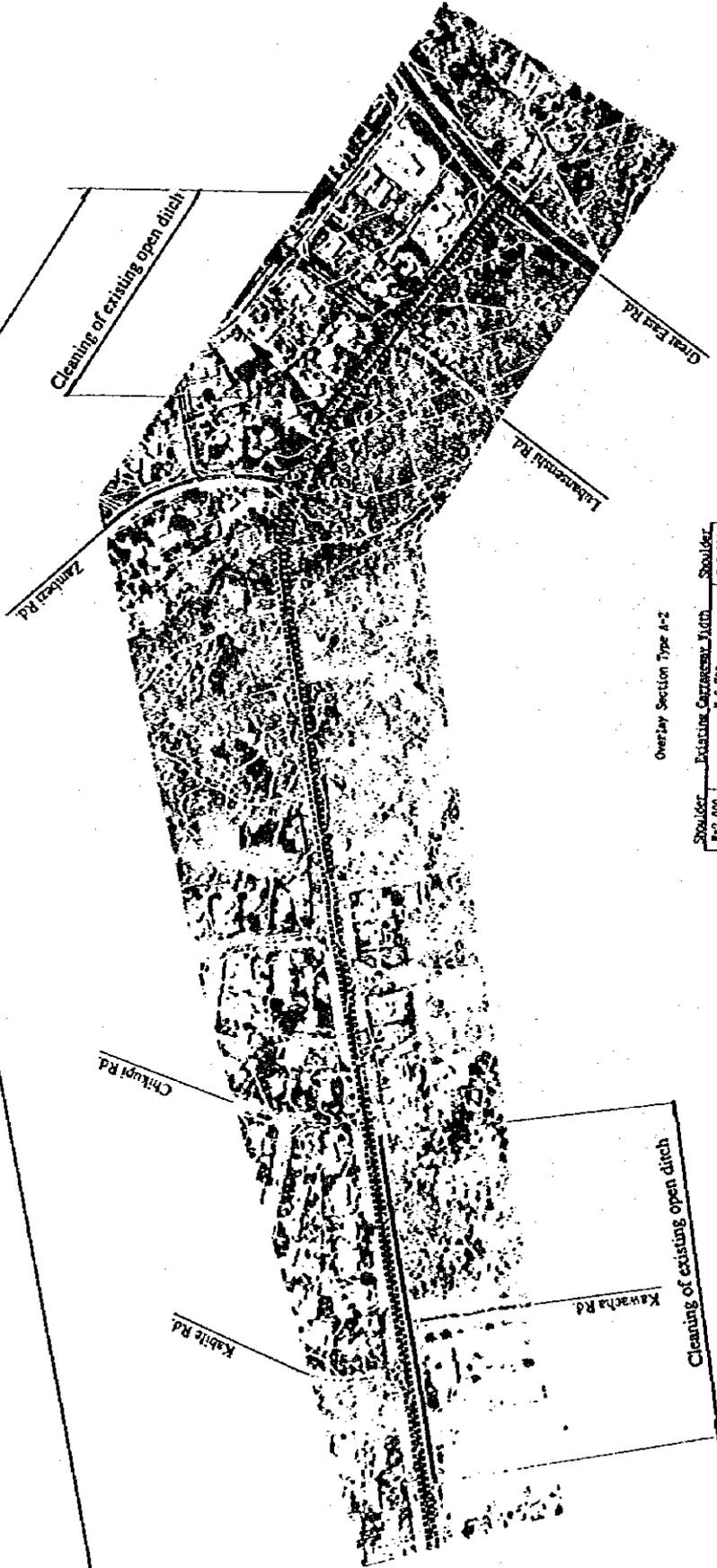


Overlay Section Type A-2

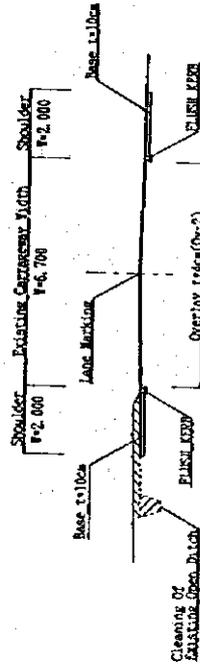


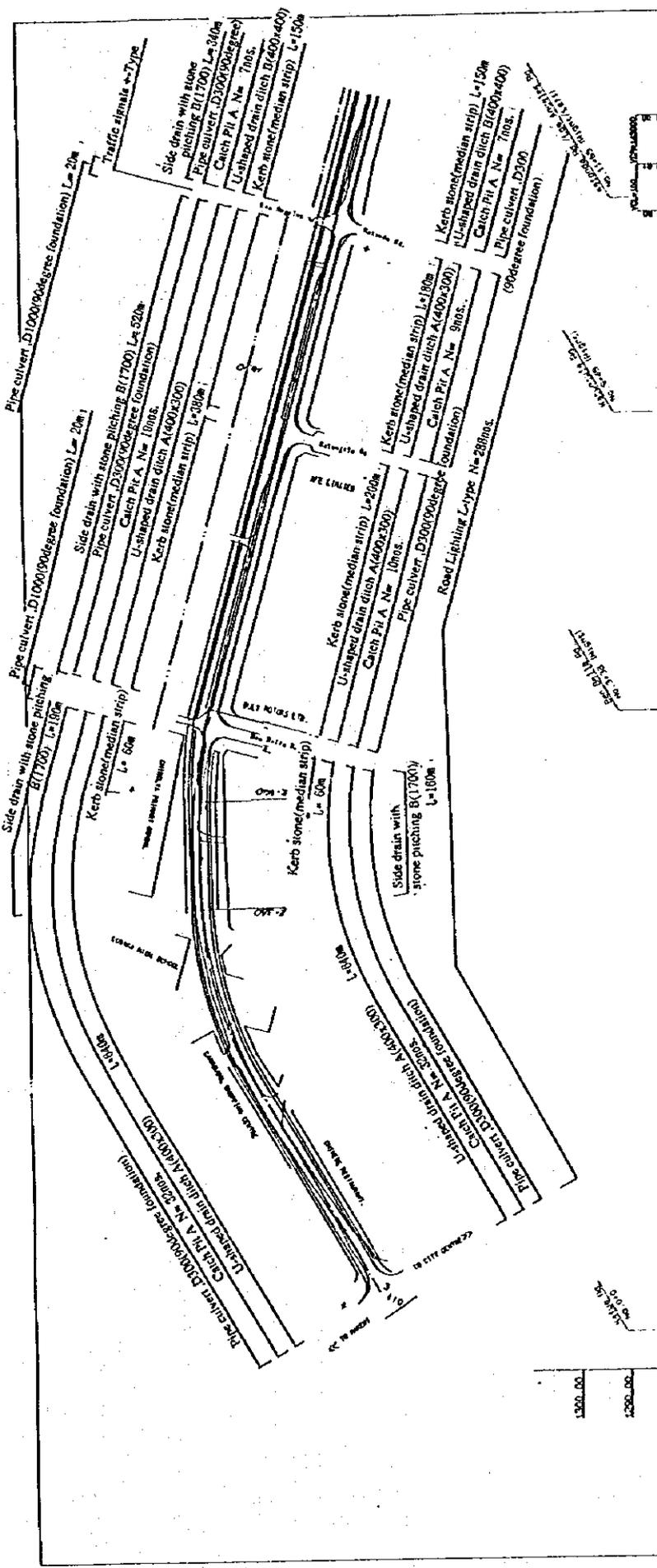
THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	35. Katima Mulilo Road(2/3) PLAN AND PROFILE	DATE: August, 1995 SHEET NO: 45
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Overlay Section Type A-2, L=4.6 km, W=6.7 m, Overlay 1=4 cm

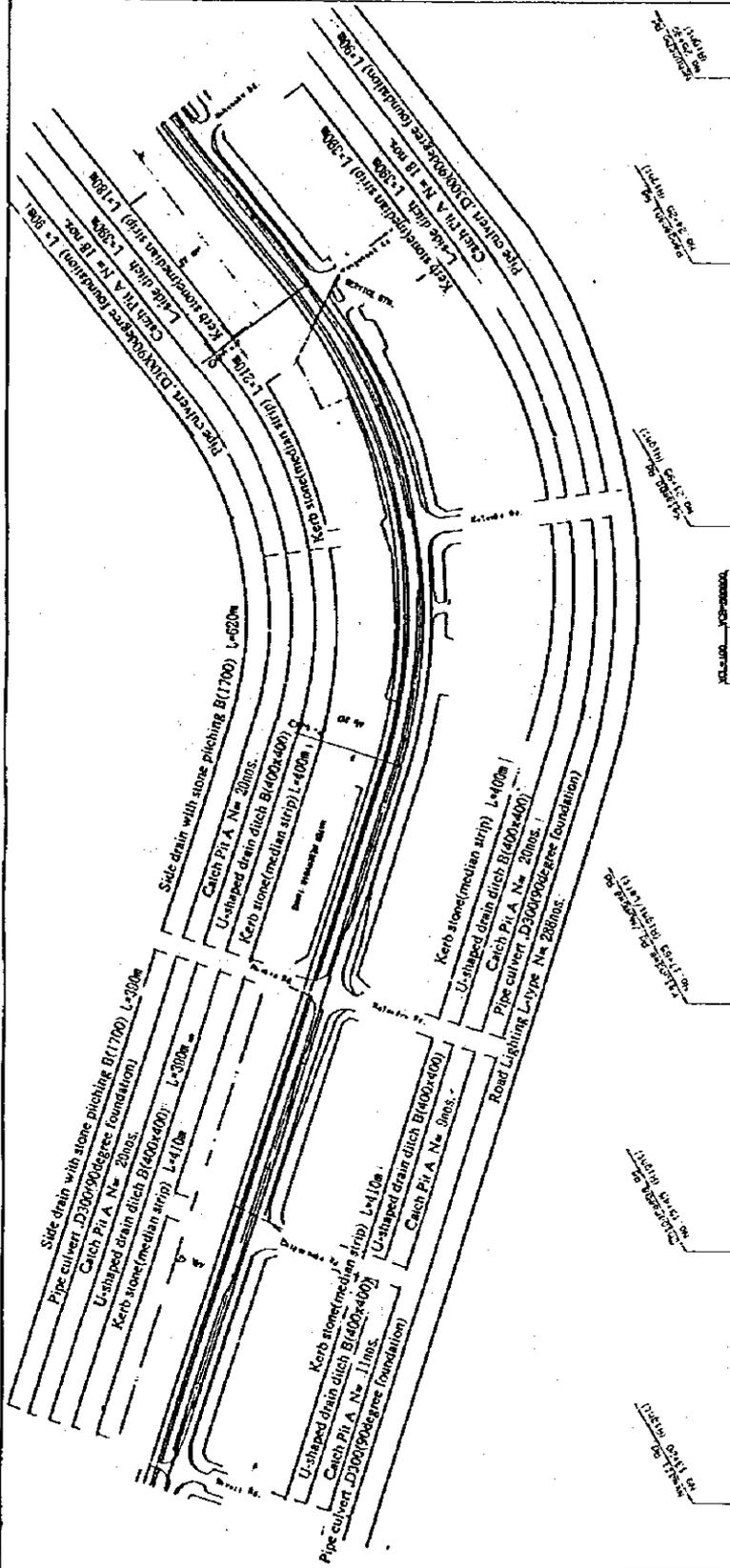


Overlay Section Type A-2





STATION NO.	CUMULATED DISTANCE	GROUND HEIGHT	PROPOSED HEIGHT	CUT HEIGHT	EMBANKMENT HEIGHT	GRADIENT
0+00	0.00	1279.00	1279.00	0.00	0.00	0.00
0+05	10.00	1278.00	1278.00	0.00	0.00	0.00
0+10	20.00	1277.00	1277.00	0.00	0.00	0.00
0+15	30.00	1276.00	1276.00	0.00	0.00	0.00
0+20	40.00	1275.00	1275.00	0.00	0.00	0.00
0+25	50.00	1274.00	1274.00	0.00	0.00	0.00
0+30	60.00	1273.00	1273.00	0.00	0.00	0.00
0+35	70.00	1272.00	1272.00	0.00	0.00	0.00
0+40	80.00	1271.00	1271.00	0.00	0.00	0.00
0+45	90.00	1270.00	1270.00	0.00	0.00	0.00
0+50	100.00	1269.00	1269.00	0.00	0.00	0.00
0+55	110.00	1268.00	1268.00	0.00	0.00	0.00
0+60	120.00	1267.00	1267.00	0.00	0.00	0.00
0+65	130.00	1266.00	1266.00	0.00	0.00	0.00
0+70	140.00	1265.00	1265.00	0.00	0.00	0.00
0+75	150.00	1264.00	1264.00	0.00	0.00	0.00
0+80	160.00	1263.00	1263.00	0.00	0.00	0.00
0+85	170.00	1262.00	1262.00	0.00	0.00	0.00
0+90	180.00	1261.00	1261.00	0.00	0.00	0.00
0+95	190.00	1260.00	1260.00	0.00	0.00	0.00
1+00	200.00	1259.00	1259.00	0.00	0.00	0.00
1+05	210.00	1258.00	1258.00	0.00	0.00	0.00
1+10	220.00	1257.00	1257.00	0.00	0.00	0.00
1+15	230.00	1256.00	1256.00	0.00	0.00	0.00
1+20	240.00	1255.00	1255.00	0.00	0.00	0.00
1+25	250.00	1254.00	1254.00	0.00	0.00	0.00
1+30	260.00	1253.00	1253.00	0.00	0.00	0.00
1+35	270.00	1252.00	1252.00	0.00	0.00	0.00
1+40	280.00	1251.00	1251.00	0.00	0.00	0.00
1+45	290.00	1250.00	1250.00	0.00	0.00	0.00
1+50	300.00	1249.00	1249.00	0.00	0.00	0.00
1+55	310.00	1248.00	1248.00	0.00	0.00	0.00
1+60	320.00	1247.00	1247.00	0.00	0.00	0.00
1+65	330.00	1246.00	1246.00	0.00	0.00	0.00
1+70	340.00	1245.00	1245.00	0.00	0.00	0.00
1+75	350.00	1244.00	1244.00	0.00	0.00	0.00
1+80	360.00	1243.00	1243.00	0.00	0.00	0.00
1+85	370.00	1242.00	1242.00	0.00	0.00	0.00
1+90	380.00	1241.00	1241.00	0.00	0.00	0.00
1+95	390.00	1240.00	1240.00	0.00	0.00	0.00
2+00	400.00	1239.00	1239.00	0.00	0.00	0.00



1300.00
1250.00
1200.00
1170.00
1150.00

STATION NO.	CUMULATED DISTANCE	GROUND HEIGHT	PROPOSED HEIGHT	CUT HEIGHT	EMBANKMENT HEIGHT	GRADIENT
0+00	0.00	1278.72	1278.72	0.00	0.00	0.00%
0+10	10.00	1278.72	1278.72	0.00	0.00	0.00%
0+20	20.00	1278.72	1278.72	0.00	0.00	0.00%
0+30	30.00	1278.72	1278.72	0.00	0.00	0.00%
0+40	40.00	1278.72	1278.72	0.00	0.00	0.00%
0+50	50.00	1278.72	1278.72	0.00	0.00	0.00%
0+60	60.00	1278.72	1278.72	0.00	0.00	0.00%
0+70	70.00	1278.72	1278.72	0.00	0.00	0.00%
0+80	80.00	1278.72	1278.72	0.00	0.00	0.00%
0+90	90.00	1278.72	1278.72	0.00	0.00	0.00%
1+00	100.00	1278.72	1278.72	0.00	0.00	0.00%
1+10	110.00	1278.72	1278.72	0.00	0.00	0.00%
1+20	120.00	1278.72	1278.72	0.00	0.00	0.00%
1+30	130.00	1278.72	1278.72	0.00	0.00	0.00%
1+40	140.00	1278.72	1278.72	0.00	0.00	0.00%
1+50	150.00	1278.72	1278.72	0.00	0.00	0.00%
1+60	160.00	1278.72	1278.72	0.00	0.00	0.00%
1+70	170.00	1278.72	1278.72	0.00	0.00	0.00%
1+80	180.00	1278.72	1278.72	0.00	0.00	0.00%
1+90	190.00	1278.72	1278.72	0.00	0.00	0.00%
2+00	200.00	1278.72	1278.72	0.00	0.00	0.00%
2+10	210.00	1278.72	1278.72	0.00	0.00	0.00%
2+20	220.00	1278.72	1278.72	0.00	0.00	0.00%
2+30	230.00	1278.72	1278.72	0.00	0.00	0.00%
2+40	240.00	1278.72	1278.72	0.00	0.00	0.00%
2+50	250.00	1278.72	1278.72	0.00	0.00	0.00%
2+60	260.00	1278.72	1278.72	0.00	0.00	0.00%
2+70	270.00	1278.72	1278.72	0.00	0.00	0.00%
2+80	280.00	1278.72	1278.72	0.00	0.00	0.00%
2+90	290.00	1278.72	1278.72	0.00	0.00	0.00%
3+00	300.00	1278.72	1278.72	0.00	0.00	0.00%

THE BASIC DESIGN STUDY ON
THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
OF LUSAKA CITY ROADS

THE REPUBLIC OF ZAMBIA
LUSAKA CITY COUNCIL

JAPAN INTERNATIONAL
COOPERATION AGENCY

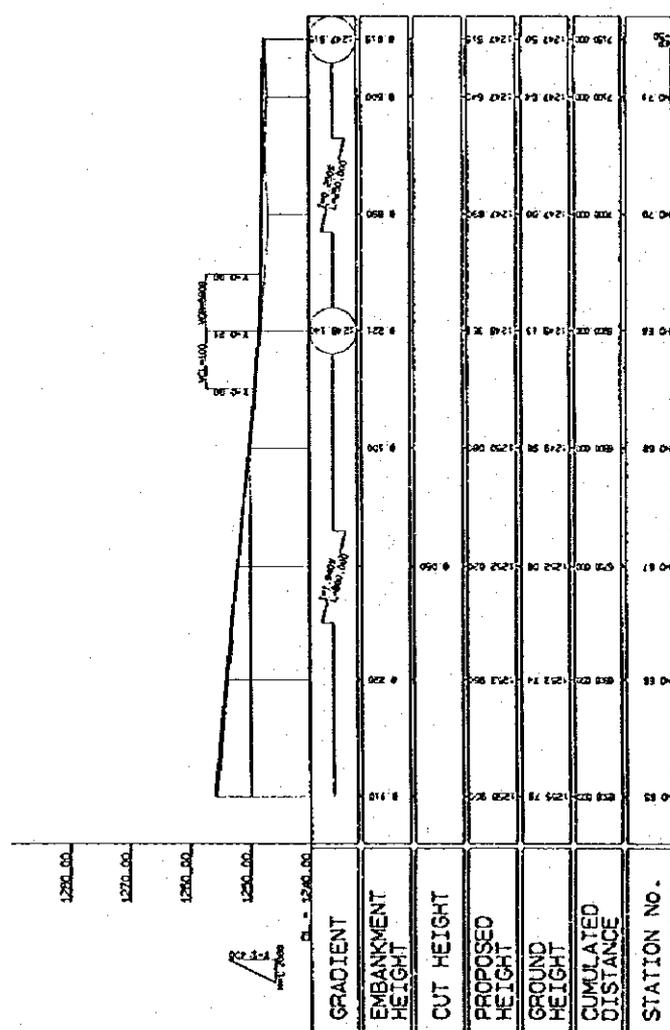
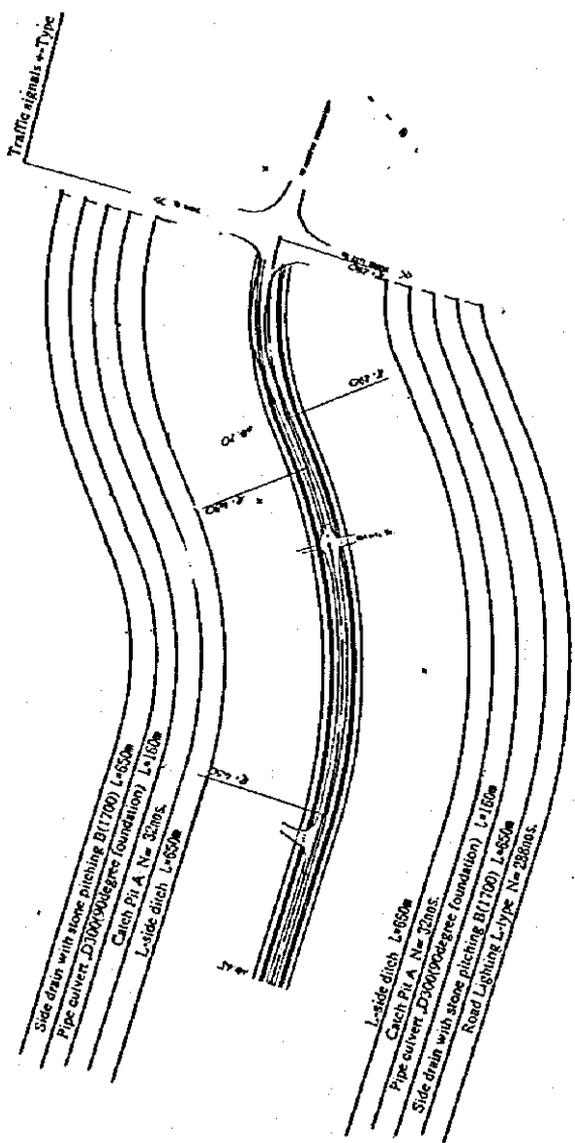
LUSAKA ROAD

PLAN AND PROFILE (2)

DATE: August, 1966

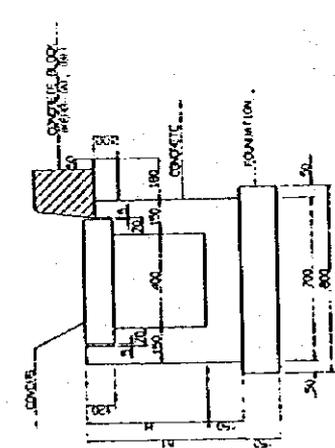
CHIEF: INO

488



GRADIENT	EMBANKMENT HEIGHT	CUT HEIGHT	PROPOSED HEIGHT	GROUND HEIGHT	CUMULATED DISTANCE	STATION No.
0.00	0.00	0.00	1236.00	1236.00	0.00	0+00
0.00	0.00	0.00	1235.00	1235.00	0.00	0+10
0.00	0.00	0.00	1234.00	1234.00	0.00	0+20
0.00	0.00	0.00	1233.00	1233.00	0.00	0+30
0.00	0.00	0.00	1232.00	1232.00	0.00	0+40
0.00	0.00	0.00	1231.00	1231.00	0.00	0+50

U-SHAPED DRAIN S-1110
TYPE-A, B, C



DIMENSION TABLE

TYPE	W	H	REMARKS
TYPE-A	500	60	
TYPE-B	600	50	
TYPE-C	700	60	

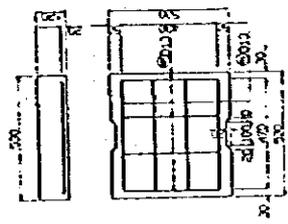
MATERIALS LIST (U-SHAPED DRAIN)

CLASSIFICATION	STANDARD	UNIT	QUANTITY	REMARKS
CONCRETE	BR 1650	CU.M	10.00	RED ASPHALT
FOUNDATION	CONCRETE (C-4)	CU.M	1.00	
TOTAL			11.00	

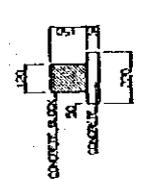
MATERIALS LIST (COVER)

CLASSIFICATION	STANDARD	UNIT	QUANTITY	REMARKS
CONCRETE	BR 1650	CU.M	0.03	
FOUNDATION	CONCRETE (C-4)	CU.M	0.01	
TOTAL			0.04	

COVER



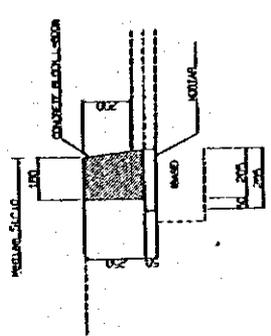
FLUSH KERB S-1110



MATERIALS LIST

CLASSIFICATION	STANDARD	UNIT	QUANTITY	REMARKS
CONCRETE	BR 1650	CU.M	0.12	RED ASPHALT
FOUNDATION	CONCRETE (C-4)	CU.M	1.10	
TOTAL			1.22	

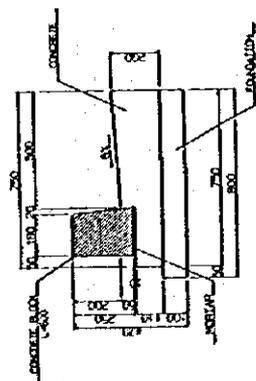
KERB STONE S-1110



MATERIALS LIST

CLASSIFICATION	STANDARD	UNIT	QUANTITY	REMARKS
CONCRETE	BR 1650	CU.M	1.00	RED ASPHALT
FOUNDATION	CONCRETE (C-4)	CU.M	1.00	
TOTAL			2.00	

L-SIDE DITCH S-1110



MATERIALS LIST

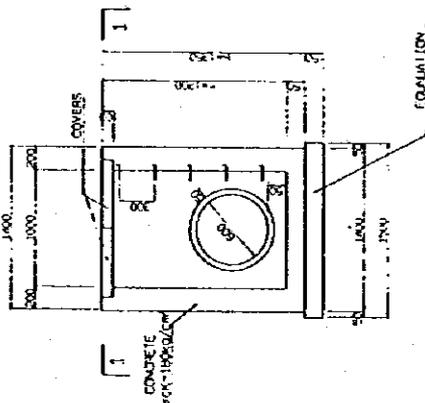
CLASSIFICATION	STANDARD	UNIT	QUANTITY	REMARKS
CONCRETE	BR 1650	CU.M	0.21	RED ASPHALT
FOUNDATION	CONCRETE (C-4)	CU.M	11.00	
TOTAL			11.21	

MAN HOLE

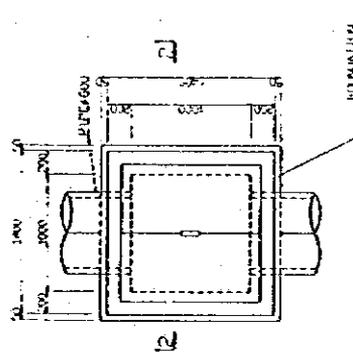
S = 1:20

MAN HOLE - (A)

2-2



3-3

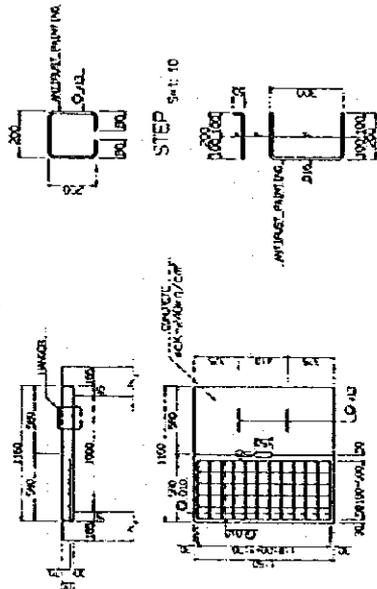


DETAIL OF COVERS

S = 1:20

MANCEP

S = 1:10



MATERIALS LIST (MAN HOLE - (A))

CLASSIFICATION	SYMBOL	UNIT	TYPE A	TYPE B	TYPE C	TYPE D	TYPE E	TYPE F	TYPE G	TYPE H
CONCRETE	CONCRETE	CUM	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
REINFORCEMENT	REINFORCEMENT	KG	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
FORM	FORM	SQ. M	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
STEEL	STEEL	KG	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
PAINT	PAINT	LITRE	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
LABOUR	LABOUR	HR	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

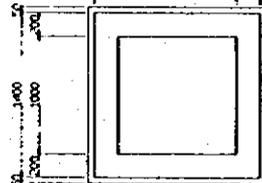
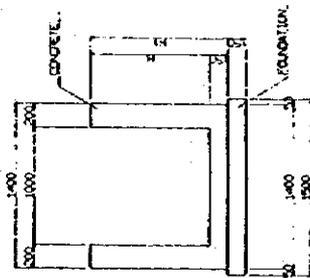
MATERIALS LIST (COVERS)

CLASSIFICATION	SYMBOL	UNIT	QUANTITY	REMARKS
CONCRETE	CONCRETE	CUM	0.13	
FORM	FORM	SQ. M	0.90	
STEEL	STEEL	KG	14.00	
PAINT	PAINT	LITRE	14.00	
LABOUR	LABOUR	HR	7.00	

DIMENSION TABLE (MAN HOLE - (A, B, C, D))

TYPE	TYPE A	TYPE B	TYPE C	TYPE D
WIDTH	1400	1400	1400	1400
DEPTH	1500	1500	1500	1500

MAN HOLE - (B, C, D)



THE REPUBLIC OF ZAMBIA
LUSAKA CITY CONCIL

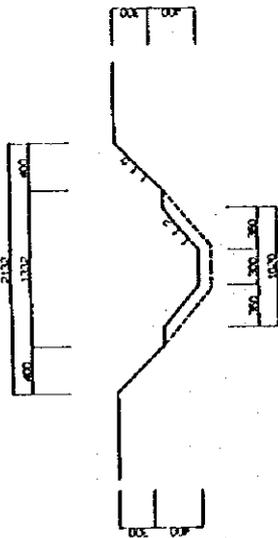
THE BASIC DESIGN STUDY ON
THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
COOPERATION AGENCY

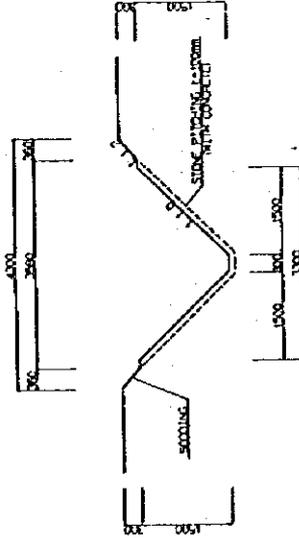
DATE: 1999
SHEET NO: 56

SIDE DRAIN WITH STONE PITCHING

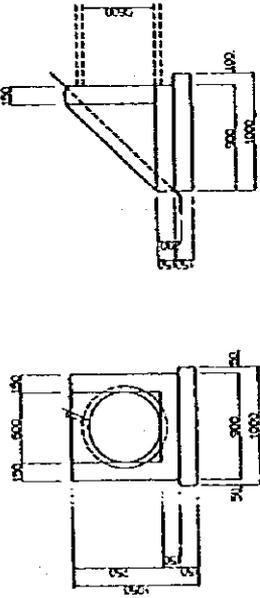
TYPE-A (700) 5-R-20



TYPE-B (1800) 5-R-40



OUT LET 5-R-20

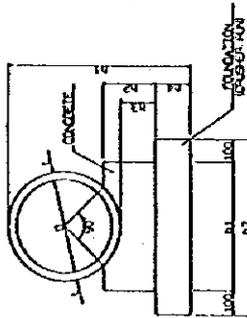


MATERIALS LIST (OUT LET)

CLASSIFICATION	STANDARD	UNIT	QUANTITY	REMARKS
CONCRETE	REINFORCED	CUM	0.208	
FOUNDATION	CONCRETE	CUM	0.150	
FORM		SQ. M	2.081	

PIPE CULVERT TYPE-A

(D=300, 400, 600, 1000) 5:1:20

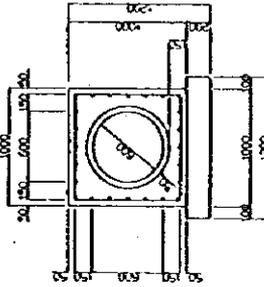


D	1	2	3	4	5	6	7	8	9	10	REMARKS
D=300	20	300	700	810	100	100	100	100	100	100	
D=400	25	400	750	720	200	100	100	100	100	100	
D=600	30	780	800	1000	200	100	100	100	100	100	
D=1000	40	1400	1400	1900	300	200	200	200	200	200	

CLASSIFICATION	STANDARD	UNIT	QUANTITY	REMARKS
PIPE CULVERT	JIS A 5303	m	10	41
CONCRETE	BRIDGE	m ³	4.88	10.48
FOUNDATION	BRIDGE	m ³	10.50	11.25
PIPE		m	35	17.25
TOTAL			60.00	88.00

PIPE CULVERT TYPE-B

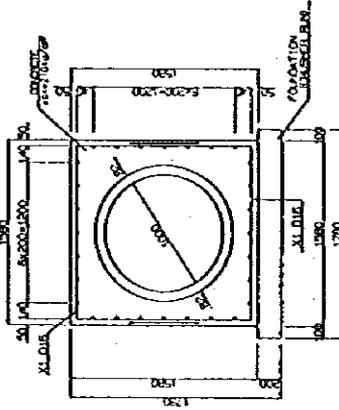
(D=600) 5:1:20



CLASSIFICATION	STANDARD	UNIT	QUANTITY	REMARKS
PIPE CULVERT	JIS A 5303	m	10	41
CONCRETE	BRIDGE	m ³	10.50	11.25
FOUNDATION	BRIDGE	m ³	10.50	11.25
PIPE		m	35	17.25
TOTAL			60.00	88.00

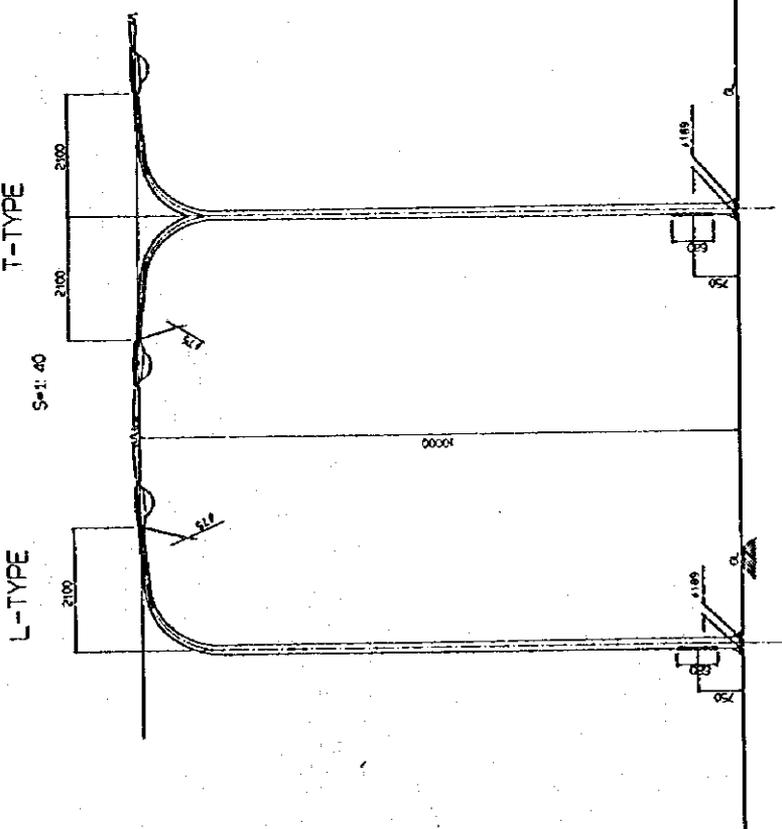
PIPE CULVERT TYPE-A

(D=1000) 5:1:20

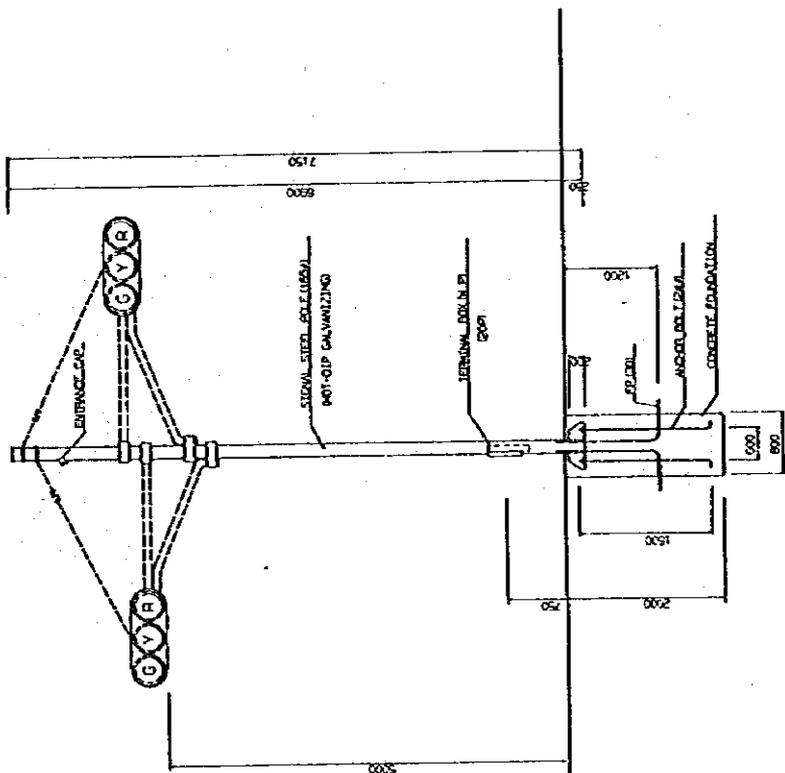


CLASSIFICATION	STANDARD	UNIT	QUANTITY	REMARKS
PIPE CULVERT	JIS A 5303	m	10	41
CONCRETE	BRIDGE	m ³	14.25	15.00
FOUNDATION	BRIDGE	m ³	14.25	15.00
PIPE		m	35	17.25
TOTAL			60.00	88.00

ROAD LIGHTING



TRAFFIC SIGNAL



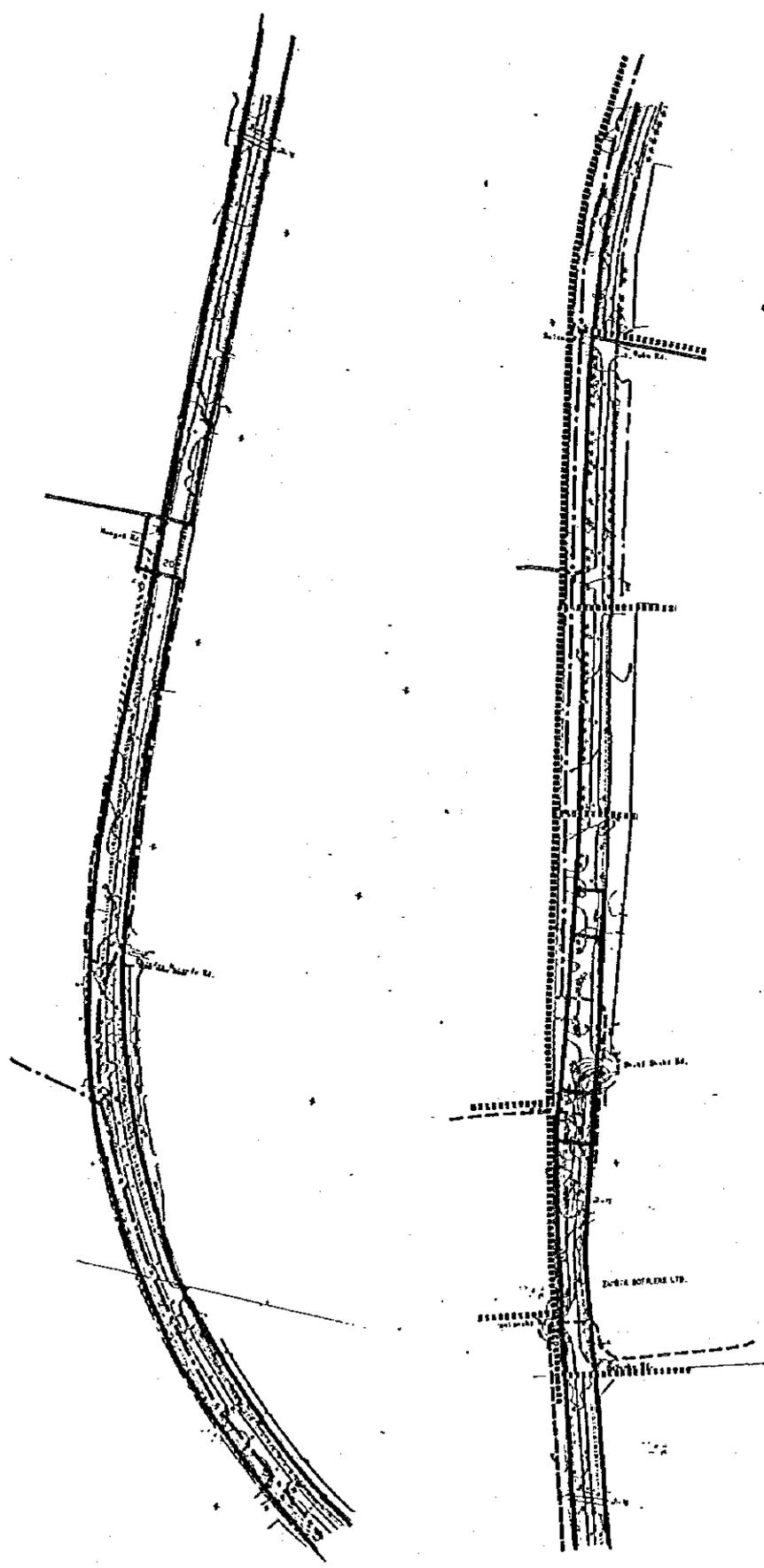
THE REPUBLIC OF ZAMBIA
LUSAKA CITY COUNCIL

THE BASIC DESIGN STUDY ON
THE PROJECT FOR IMPROVEMENT AND MAINTENANCE
OF LUSAKA CITY ROADS

JAPAN INTERNATIONAL
COOPERATION AGENCY

ROAD LIGHTING AND
TRAFFIC SIGNAL

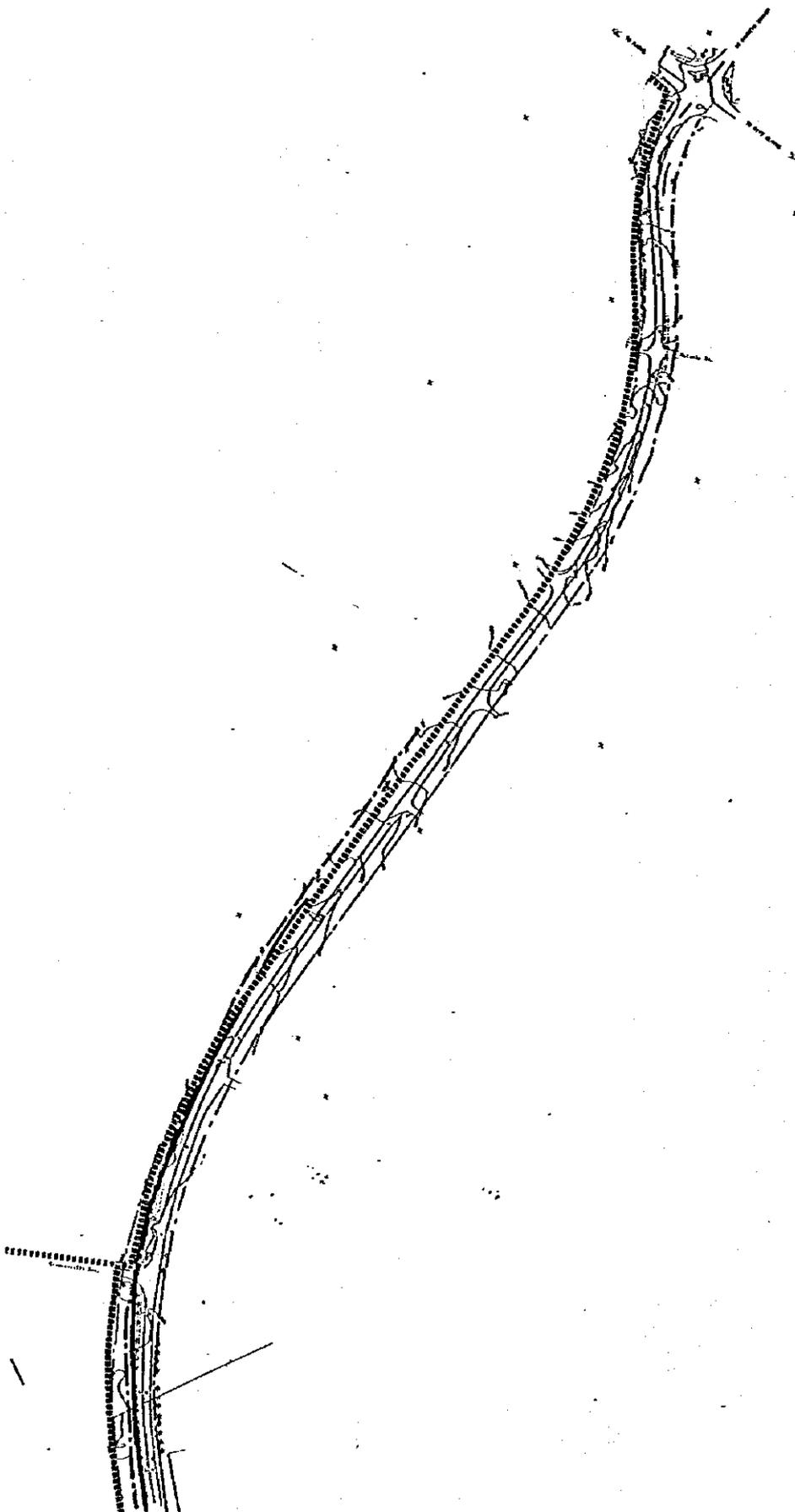
DATE August, 1995
SHEET NO 59



Legend

	Sewerage
	Water Main
	Telephone Cable
	Electricity Line(over head)
	Electricity Line(underground)

THE REPUBLIC OF ZAMBIA LUSAKA CITY CONCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	Lumumba Road	DATE	SHEET NO
				APRIL 1995	61



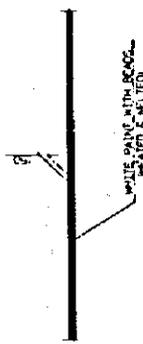
Legend

	Sewerage
	Water Main
	Telephone Cable
	Electricity Line (over head)
	Electricity Line (underground)

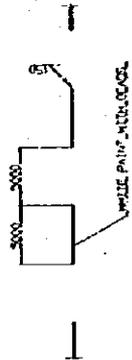
THE REPUBLIC OF ZAMBIA LUSAKA CITY COUNCIL	THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS	JAPAN INTERNATIONAL COOPERATION AGENCY	Lumumba Road	DATE	SHEET NO
				AUGUST, 1995	62

MARKINGS

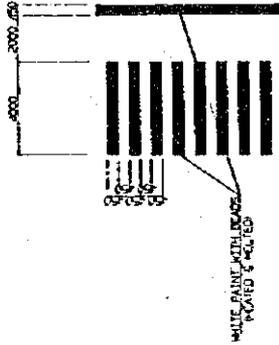
OUTER-BOUNDARY LINE S=1:50



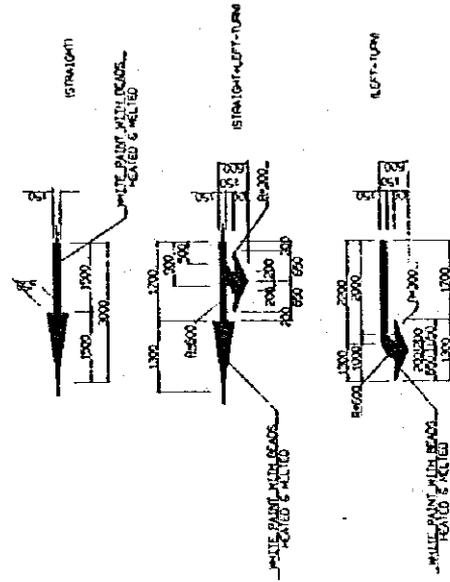
CENTER LINE S=1:200



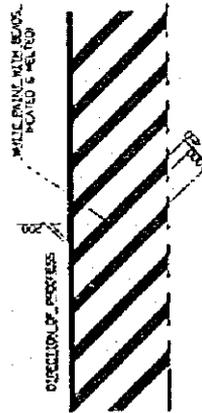
PEDESTRIAN CROSSING S=1:100



ARROW MARK S=1:50



ZEBRA MARKS S=1:100



<p>THE REPUBLIC OF ZAMBIA LUSAKA CITY COUNCIL</p>	<p>THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF LUSAKA CITY ROADS</p>	<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>LANE MARKINGS</p>	<p>DATE: 05/01/1979 SHEET NO: 03</p>
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資料編－B：調査関連資料

- B-1. 調査団員氏名、所属
- B-2. 調査日程
- B-3. 相手国関係者リスト
- B-4. 当該国の社会経済事情
- B-5. 協議議事録

資料B-1：調査団員氏名、所属

調査団は7名で構成され、団員の氏名及び所属は以下の通りである。

1. 総括： 足立 隼夫
国際協力事業団 国際協力専門員
2. 無償資金協力： 西本 俊幸
外務省経 済協力局無償資金協力課
3. 技術顧問： 阿部 公一
(道路計画) 日本道路公団 技術部道路技術課
4. 業務主任／道路整備計画： 新開 弘毅
日本工営 (株)
5. 道路計画／機材計画： 桑田 幸
日本技術開発 (株)
6. 交通計画： 松田 和美
日本工営 (株)
7. 施工計画／積算： 片平 晋弘
日本工営 (株)

資料B-2：調査日程

現地調査は以下の日程で実施された。

日順	日付	曜日	調査内容	宿泊地	調査内容
1	5月28日	日	足立団長、西本、阿部、新開、桑田 随員 ルサカ	ルサカ	団内打ち合わせ
2	5月29日	月		"	JICA、日本大使館、ルサカ市、自治、住宅省、公共事業供給省 随員
3	5月30日	火		"	ルサカ市、自治、住宅省、公共事業供給省 随員
4	5月31日	水		"	現地視察
5	6月1日	木	松田、片平 随員 ルサカ	"	同上
6	6月2日	金		"	ルサカ市との協議
7	6月3日	土		"	ドラフト（案）の作成
8	6月4日	日		"	ドラフト（案）の検討
9	6月5日	月		"	現地調査
10	6月6日	火	足立団長、西本、阿部 随員 ルサカ	"	ルサカ市との協議、シブの付化、国家開発計画委員会 随員
11	6月7日	水		"	JICA、日本大使館の訪問 道路インベントリー、舗装状況調査 交通調査の契約準備、積算
12	6月8日	木		"	道路インベントリー、舗装状況調査、交通調査の契約見直し 通調査の見直し
13	6月9日	金	足立団長、西本、阿部 随員 東京	"	舗装構成調査、路床調査 地形調査の見直し 道路インベントリー、舗装状況調査、舗装構成調査、路床調査、交通調査、地形調査の契約完了
14	6月10日	土		"	資料整理
15	6月11日	日		"	資料整理
16	6月12日	月		"	現地視察作業開始、その他
17	6月13日	火		"	"
18	6月14日	水		"	"
19	6月15日	木		"	"

表 現地調査スケジュール（続）

日順	日付	曜日	調査内容	宿泊地	調査内容
20	6月16日	金		"	現地視察調査
21	6月17日	土		"	同上
22	6月18日	日		"	"
23	6月19日	月		"	調査結果の整理・解析
24	6月20日	火	松田、片平 随員 ルサカ	"	同上
25	6月21日	水		"	"
26	6月22日	木		"	調査結果の整理・解析 改善方式の検討
27	6月23日	金		"	同上
28	6月24日	土		"	"
29	6月25日	日		"	概略評価と優先プロジェクトの選定
30	6月26日	月		"	同上
31	6月27日	火		"	資料整理
32	6月28日	水		"	同上
33	6月29日	木		"	ルサカ市と協議、日本国大使館報告
34	6月30日	金		"	JICA結果報告
35	7月1日	土		"	帰国準備
36	7月2日	日	新開、桑田 随員 ルサカ	ロンドン	移動

資料B-3：相手国関係者リスト

- (1) 地方自治住宅省 (Ministry of Local Government and Housing)
Permanent Secretary, Mr. Nelson Mapala
Advisor, Mr. Patel
Staff, Mis Sukapaipi

- (2) ルサカ市技術局
Director of Engineering Services, Mr. Peter Lubambo
Director of Administration, Mr. Matoto
Director of Legal Service, Mr. Mwing
Director of Finance, Mr. Limowi

- (3) 通信運輸省
Permanent Secretary, Mr. Ronald, C. Mukunma

- (4) 公共事業供給省
Permanent Secretary, Mr. M. X. Mufwaya
Director of Roads, Mr. Mwila

- (4) 国家道路委員会 (National Roads Board)
Chairman, Mr. Raymond Jhala
Advisor, Mr. N. Gawanadha

- (5) 国家開発計画委員会 (National Committee Development Planning)
Permanent Secretary, Mess. Irene M. Kamanga

- (6) 日本国大使館
増井正 特命全権大使
高瀬廉夫参事官
嶋田二等書記官
古賀二等書記官

- (7) ザンビアJICA事務所
江畑義徳事務所長
佐々木克弘次長

資料B-4 当該国の社会経済事情

一般	面積	751,614 km ² (日本の約2倍)	貿易額の推移			
	人口	(91年) 863.8万人 (人口密度11.5人/km ²)	(単位: 百万ドル)			
	首都	ルサカ (Lusaka) (人口99.2万人、91年)		1983年	1992年	
	主要都市	キトエ、ンドラ、チバク、リビングストーン	輸出	866	1,165	
	主要民族	トワ系(南部)、ニヤンガ系(東部)、ベンバ系(北部)、ルダ系(北西部) など13部族	輸入	646	1,612	
	主要言語	英語(公用語)、ベンバ語など	労働人口(77年) 37.3万人 失業者(75年) 13万人			
政治	主要宗教	原始宗教(大部分)、キリスト教、ムスリム教など	日本との関係			
	政体	共和制	外交関係樹立年月	1964年10月24日承認		
	元首	フレデリック・チルバ大統領	在外交館	日本から: 大 日本へ: 大		
治	国会	一院制(135議席)	主要友好団体	日本ザンビア友好協会		
	国際関係・主な加盟国際機関	英連邦に加盟。社会主義的人道国家建設。ほとんどの国際機関に加盟。	在留邦人数	(83年) 252人		
経済	領海	内陸国	日本人学校所在地	(全日制日本人学校) なし (日本語補習授業校) なし		
	国民総生産(GNP)	(92年) 85.9億ドル 経済成長率 3.5%	経済協力(ODA)	無償資金協力 政府貸付		
	1人当りGNP	(92年) 290ドル 年平均増加率 -2.1%	調査団・専門家派遣	(93年) 989人(累計)		
	消費者物価上昇率	(92年) 207%	協力隊の派遣	(93年) 592人(累計)		
	計画・重点政策など	自由化経済政策の導入による経済発展政策 経済の創依存からの脱却、農工業整備拡大。	研修員の受入	(93年) 448人(累計)		
	通貨単位	クワチャ(Kwacha)、100ングウェ	日本との貿易額の推移			
経済	為替レート	1米ドル=641.4クワチャ (1993年平均)	(単位: 百万ドル)			
	主要産業	農業(トウモロコシ、タバコ、ピーナツ、綿花) 鉱業(銅、コバルト、亜鉛、鉛、石炭、ウラン) 工業(食品加工、醸造、建築資材、肥料、土木輸送機械)		1983年	1991年	
	主要天然資源	銅、コバルト、鉛、ウラン、石炭	日本からの輸入	28	53	
エネルギー	生産量	N.A.	日本への輸出	167	246	
	消費量	122万トン(石油換算)	日本との貿易品目構成			
保健	年間人口増加率	3.5%	(1981年) (単位: 万ドル)			
	乳児死亡率(10~1歳)	出生1,000人当り死亡86人	日本からの輸出品目	%	日本への輸出品目	%
教育	出生児平均寿命	男50.70 女53.00	自動車	48.5	銅地金	79.6
	教育制度	8.5割 教育程度年限なし	機械類	15.8	コバルト	18.8
マ	成人識字率	76%	電気機械	13.6	その他	1.6
	主要新聞	Zambia Daily Mail, Times of Zambia	タイヤ・チューブ	8.3		
放送	放送関係	テレビ局(国営) 1、ラジオ局(国営) 1	金製品	3.6		
	国防支出	127億ドル 対国家予算比 %、対GNP比 %				
防	兵力	陸軍	22,000人			
		海軍	-			
		空軍	1,600人			
兵役制度	志願制					
医療同盟関係など						

資料編－C：技術資料

- C-1. インベントリー調査結果
- C-2. 舗装構造及び路床強度調査結果
- C-3. 交通量調査結果
- C-4. 参考資料

資料C-1：インベトリー調査結果

ルサカ市の修復協力要請道路の総延長160kmについて各路線別にインベトリー調査を実施した。

本格調査に先立ち、ルサカ市の担当技術者によるプロジェクト路線について、実地に案内を受けた。次に1/5,000の地積図と航空写真を測量局から入手し、調査方針、方法等を検討の上、インベトリー調査を行った。

インベトリー調査の対象項目は以下のとおりである。

道路の延長、車線数、道路のクラス、横断構成、舗装のタイプ、用地巾、車道の状況、路肩の状況、土地利用形態（沿道）、道路横断構造物、道路排水システム、道路排水構造物のタイプと規模、道路施設、など

調査結果は次頁に示す。

ルサカ市の既存道路に関する大略の調査結果は以下の通りである。

【線形及び幅員】

縦断線形は地形がフラットなため大部分良好である。又、平面線形についても特別問題になるような箇所は無い。

幅員構成についてはルムンバ道路を除いて、大部分の道路がその規格と交通量を満足するものである。

【交差点】

主要幹線道路相互の交差点はラウンドアバウト（ロータリー）により制御されているが、その他の道路は十字交差である。

朝夕のラッシュ時には渋滞が発生しているが、略々、30分位の間のことなので現在はさしたる問題ではないが、将来、交通量の増加に応じて交差点の改良が必要と考えられる。

【舗装】

大部分の主要道路はアルファルト舗装されている。しかし、これらの道路は適切なメンテナンスが長い間行なわれていないため、かなり劣化が進んでいる。詳細については次章で述べる。

【用地収容】

測量局の地積図（ルサカ市道路局公認）によると全ての道路が現在十分な用地を持っており、リハビリテーションには問題ないと考えられる。

【バス停車帯】

ルサカ市ではバス交通が（特に民間バス）が市民の主要な交通手段である。しかし、バスの停留所にバス停車帯があつたり無かつたりしており、統一がとれておらず交通の流れを乱している場合が見られる。

Name of Road	Commonwealth	Route No.	89
From:	Lumumba	To:	

Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage		Nil		UD (Poor)		
Shoulder & Sidewalk						
Type of Pavement		Wc=1				
Shoulder & Sidewalk						
Drainage		Nil	UD (Poor)	Nil	UD (Poor)	
P.S.F.	23	23	23	23	23	23

Name of Road	Zambesi	Route No.	102
From:	Katima Mulilo	To:	

Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage	Nil	UD (Poor)	Nil			
Shoulder & Sidewalk						
Type of Pavement		Wc=1	Pol Tiles			
Shoulder & Sidewalk						
Drainage		UD (Poor)		UD (Poor)		
P.S.F.	16	13	13	13		

Name of Road	Garden Road	Route No.	104
From:	Manchinchi	To:	

Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage		Nil		UD (Poor)		
Shoulder & Sidewalk						
Type of Pavement		Bumping	Wc=0.1			
Shoulder & Sidewalk						
Drainage		UD (Poor)		Nil		
P.S.F.	23	23	23	23	23	

Name of Road	Antelope	Route No.	122
From:	Commonwealth	To:	

Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage		UD (Poor)	Nil			
Shoulder & Sidewalk						
Type of Pavement		Pol Tiles	Wc=1			
Shoulder & Sidewalk						
Drainage		UD (Poor)	UD (Poor)			
P.S.F.	24	17	17			

Name of Road	Katima Mulilo	Route No.	33
From:	Great North Road	To:	

Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage		UD (Poor)		Nil	UD (Poor)	UD (Poor)
Shoulder & Sidewalk						
Type of Pavement		Bumping	Bumping	Pol Tiles	Wc=0.1	Bumping
Shoulder & Sidewalk						
Drainage					UD	
P.S.F.	18	23	23	23	23	23

Name of Road: From:	Lumumba Kafue	Route No: To:	8
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Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage					OD (S)	
Shoulder & Sidewalk Type of Pavement			W=11.1			
Shoulder & Sidewalk						
Drainage		L-Type (F)				
PST	24	26	27	28	28	

Distance	2.5	3	3.5	4.0	4.5	5
Drainage						NS
Shoulder & Sidewalk Type of Pavement			UBridge (Sboring)			
Shoulder & Sidewalk						
Drainage			OD (F)			NS
PST	28	29	30	31	32	33

Distance	5	5.5	6.0	6.5	7	7.5
Drainage			NS			
Shoulder & Sidewalk Type of Pavement						
Shoulder & Sidewalk						
Drainage			NS			
PST	33	34	35	36	37	38

Name of Road: From:	Kalambo Lumumba	Route No: To:	7
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Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage			L-Type			
Shoulder & Sidewalk Type of Pavement			W=9.9			
Shoulder & Sidewalk			W=18.9			
Drainage			L-Type			
PST	39	40	41	42	43	44

Name of Road: From:	Lukanga Ngwezi	Route No: To:	66
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Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage			NS			
Shoulder & Sidewalk Type of Pavement			Full line W=6.1	Crack		
Shoulder & Sidewalk						
Drainage			NS			
PST	45	46	47	48	49	50

Name of Road: From:	Mulendre Afick Mkata	Route No: To:	35
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Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage			NS			
Shoulder & Sidewalk Type of Pavement			W=6.1			
Shoulder & Sidewalk			Crack	Bumping		
Drainage			OD (F)			
PST	51	52	53	54	55	56

From:	Chitumbura Must-O-Tunya	Route No. To:	24
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Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage				UD (Poor)		Nil
Shoulder & Sidewalk						
Type of Pavement		Bumping		WC=7.1		
Shoulder & Sidewalk						
Drainage	Nil	UD (Poor)		Nil		UD (Poor)
P.S.I	23	23	23	23	23	23

Distance	2.5	3	3.5	4.0	4.5	5
Drainage	Nil		UD (Poor)		UD	Nil
Shoulder & Sidewalk						
Type of Pavement		Bumping				
Shoulder & Sidewalk						
Drainage	UD (Poor)	Nil		UD (Poor)		
P.S.I	23	21	20	23	21	21

Distance	5	5.5	6.0	6.5	7	7.5
Drainage	Nil		UD (Poor)		Nil	
Shoulder & Sidewalk						
Type of Pavement		Bumping				
Shoulder & Sidewalk						
Drainage	UD (Poor)			Nil		
P.S.I	23	23	24	24	23	23

Name of Road:	Los Angeles	Route No:	22
From:	Lumumba	To:	KANYAMA Compound

Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage	L-type			UD (Poor)		Nil
Shoulder & Sidewalk						
Type of Pavement	Foil Holes	WC=16.0				
Shoulder & Sidewalk						ORIG
Drainage	L-type					
P.S.I	13	11	13	12	12	10

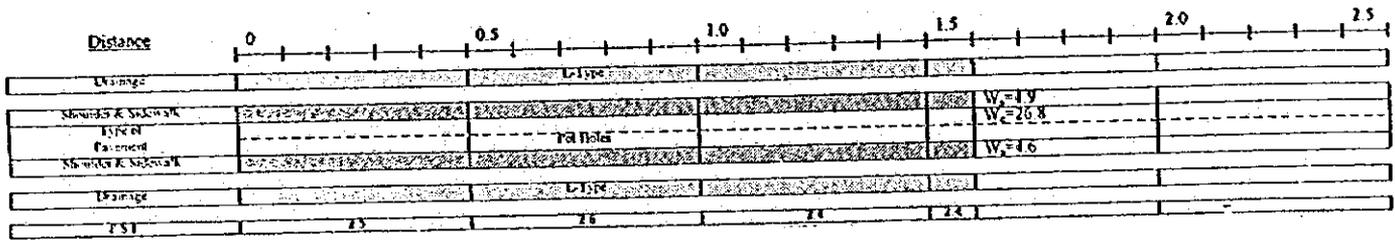
Distance	2.5	3	3.5	4.0	4.5	5
Drainage		UD (Poor)		Nil		
Shoulder & Sidewalk						
Type of Pavement		ORIG				
Shoulder & Sidewalk						
Drainage	Nil			UD (Poor)		
P.S.I	14	16	0.0			

Name of Road:	Mumbwa	Route No:	20
From:	Lumumba	To:	

Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage		Nil			UD (Poor)	
Shoulder & Sidewalk						
Type of Pavement		Foil Holes	WC=16.1			
Shoulder & Sidewalk						
Drainage			UD (Poor)			
P.S.I	19	21	25	21	20	19

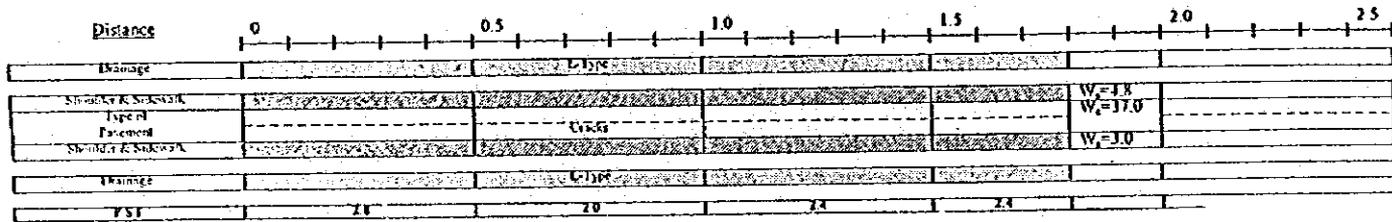
Distance	2.5	3	3.5	4.0	4.5	5
Drainage		Nil				
Shoulder & Sidewalk						
Type of Pavement						
Shoulder & Sidewalk						
Drainage		Nil				
P.S.I	23	23	23			

Name of Road:	Freedom Way	Route No:	5
From:	Benbella	To:	

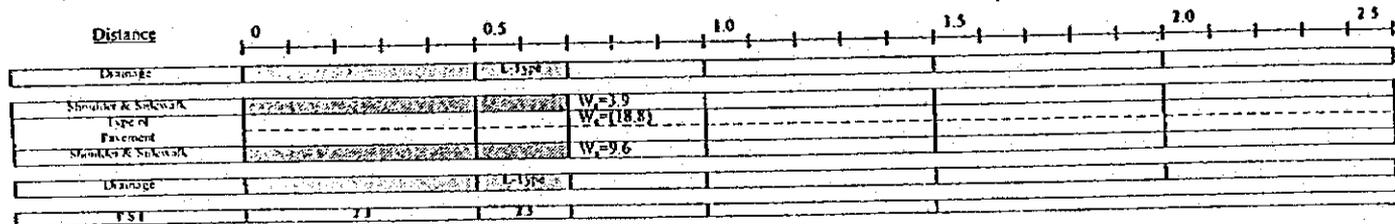


Existing Road Condition

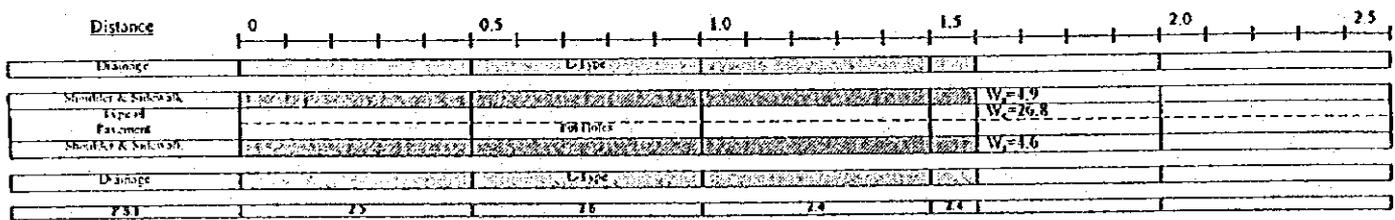
Name of Road:	Cairo	Route No:	
From:	Benbella	To:	G.N.R. Roundabout



Name of Road:	Kalambo	Route No:	7
From:	Lumumba	To:	

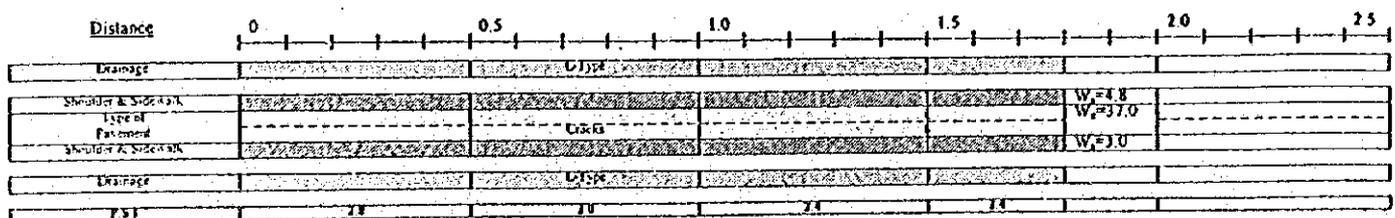


Name of Road:	Freedom Way	Route No:	5
From:	Benbella	To:	



A-2.4.3-1
道路現況調査

Name of Road:	Cairo	Route No:	4
From:	Benbella	To:	G.N.R. Roundabout



Name of Road From:	Mandevu Chipata Great North Road	Route No. To:	37
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Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage		UU (Poor)			Nil	
Shoulder & Sidewalk Type of Pavement		DMG		W=6.1		DMG
Shoulder & Sidewalk						
Drainage	Nil		UU (Poor)		Nil	
PST	00	00	23		00	13

Distance	2.5	3	3.5	4.0	4.5	5
Drainage	Nil		UU (Poor)			
Shoulder & Sidewalk Type of Pavement		DMG				
Shoulder & Sidewalk						
Drainage	Nil					
PST	00		23	23		

Name of Road From:	Chawama/John Howard Ca Fve	Route No. To:	38
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Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage		Nil		UU (Poor)		Nil
Shoulder & Sidewalk Type of Pavement				DMG (Earth)		Wc=0.1
Shoulder & Sidewalk						Pot
Drainage	Nil				Nil	
PST	00		00		00	14

Distance	2.5	3	3.5	4.0	4.5	5
Drainage	Nil	UU		Nil		
Shoulder & Sidewalk Type of Pavement		Pot Holes		DMG (Earth)		
Shoulder & Sidewalk						
Drainage	UU (Poor)	Nil		UU (Poor)		Nil
PST	12		00		00	

Name of Road From:	Mutandwa Great East Road	Route No. To:	64
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Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage		UU (Poor)			UU (Poor)	
Shoulder & Sidewalk Type of Pavement				Wc=6.1		
Shoulder & Sidewalk			Gravel		(Earth)	
Drainage		UU (Poor)				
PST		28		23	00	00
				23		23

Name of Road From:	Mnali Lkaunda Great East Road	Route No. To:	25
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Distance	0	0.5	1.0	1.5	2.0	2.5
Drainage				Nil		
Shoulder & Sidewalk Type of Pavement				Pot Holes		Wc=0.1
Shoulder & Sidewalk						Earth
Drainage					Nil	
PST		13		14		13
					00	00

Name of Road	Kalinga lingo (Kamloop)	Route No.	26
From:	Alick Nhata	To:	
Distance	0	0.5	1.0
Drainage			Nil
Shoulder & Sidewalk			Crack Bumping
Type of Pavement			W=6.1
Shoulder & Sidewalk			
Drainage			Nil
P.S.I	23	26	23

Name of Road	Alick Nhata	Route No.	27
From:	Haile Selassie	To:	
Distance	0	0.5	1.0
Drainage			Nil
Shoulder & Sidewalk			Crack
Type of Pavement		W=6.1	Bumping
Shoulder & Sidewalk			Crack
Drainage			
P.S.I	18	17	13

Distance	2.5	3	3.5	4.0	4.5	5
Drainage			Nil			
Shoulder & Sidewalk						
Type of Pavement			Crack			
Shoulder & Sidewalk						
Drainage			Nil			
P.S.I	15	14	13	15		

Name of Road	Palm Drive	Route No.	33
From:	Great East Road	To:	
Distance	0	0.5	1.0
Drainage	Nil	OD (Floor)	Nil
Shoulder & Sidewalk			Work
Type of Pavement			
Shoulder & Sidewalk			Pot Holes
Drainage		OD (Floor)	OD (Floor)
P.S.I	23	34	29

Distance	2.5	3	3.5	4.0	4.5	5
Drainage	Nil	OD (Floor)				
Shoulder & Sidewalk						
Type of Pavement		Pot Holes				
Shoulder & Sidewalk						
Drainage		OD (Floor)				
P.S.I	14	13				

Name of Road	Kalundwe	Route No.	9
From:	Lumumba	To:	
Distance	0	0.5	1.0
Drainage			
Shoulder & Sidewalk			W=5.7
Type of Pavement			W=21.2
Shoulder & Sidewalk			W=21.6
Drainage			
P.S.I	21	19	

資料C-2：舗装構造&路床強度調査結果

舗装構造調査は既存の舗装構造を視察し、現在および将来の使用に際し適切な状態にあるかどうか調査し、オーバーレイや舗装の打ち換え設計の基本データを得る為に行なう。調査は現地業者に委託し、調査の指示監督の下に行なった。

その調査は以下のものより構成されている。

- 路床材調査15ヶ所
- 舗装構造調査80ヶ所

調査地点は対象道路上の代表的な地点の30地点において舗装構造調査を行ない15地点において試料を採取し路床強度調査（CBR 納試験）を行なった。

ルサカ市の道路の舗装は殆どがアスファルト舗装であり、サーフェイドレッシング（SD）と呼ばれる簡易舗装が通常の加熱混合式アスファルトコンクリート舗装である。市内を通過する国道は加熱混合式アスファルトコンクリート舗装であるが、コンパウンドへのアクセス道路や市内の道路ネットワークを形成する道路は殆どがSDである。SDの舗装構造は土砂混じりの路盤材と瀝青材による表層で構成されている。

Components and Thickness of Existing Pavement Structure

<u>Survey Point</u>	<u>Components and Thickness of Pavement Structure</u>
TP No. 1 Chawama Rd	Depth 0 - 600mm Gravel
TP No. 2 Makeni Rd	Depth 0 - 300mm Gravel
TP No. 3 Kanyama Rd	Depth 0 - 300mm Gravel
TP No. 4 Lumumba Rd	Depth 0 - 500mm Gravel
TP No. 5 Cairo Rd	Depth 0 - 300mm Gravel 300 mm - 500 mm Silty Soil
TP No. 6 Freedom Rd	Depth 0 - 400mm Gravel 400 mm - 500 mm Silty Soil
TP No. 7 Mumbwa Rd	Depth 0 - 500mm Gravel
TP No. 8 Lumumbwa Rd	Depth 0 - 250mm Gravel
TP No. 9 Mungwi Rd	Depth 0 - 400mm Gravel
TP No. 10 Lumumba Rd	Depth 0 - 300mm Gravel
TP No. 11 Commonwealth Av	Depth 0 - 400mm Gravel
TP No. 12 Great North Rd	Depth 0 - 500mm Gravel
TP No. 13 Katima Mulilo Rd	Depth 0 - 500mm Gravel
TP No. 14 Mandevu - Chipata Rd	Depth 0 - 200mm Gravel 200 mm - 500 mm Silty Soil
TP No. 15 Mutandwe (Roma) Rd	Depth 0 - 300mm Gravel
TP No. 16 Kwacha Rd	Depth 0 - 500mm Gravel
TP No. 17 Great East Rd	Depth 0 - 300mm Gravel
TP No. 18 Lufubu Rd	Depth 0 - 500mm Gravel
TP No. 19 Munali Rd	Depth 0 - 500mm Gravel
TP No. 20 Great East Rd	Depth 0 - 500mm Gravel
TP No. 21 Palm Drive (Chelstone)	Depth 0 - 250mm Gravel
TP No. 22 Kalingalinga Rd	Depth 0 - 500mm Gravel
TP No. 23 Mutendere Rd	Depth 0 - 250mm Gravel
TP No. 24 Alick Nkhata Rd	Depth 0 - 500mm Gravel
TP No. 25 Twinn Palm Rd	Depth 0 - 500mm Gravel
TP No. 26 Lake Rd	Depth 0 - 250mm Gravel
TP No. 27 Independence Ave	Depth 0 - 250mm Gravel
TP No. 28 Burma Rd	Depth 0 - 400mm Gravel
TP No. 29 Chilumbulu Rd	Depth 0 - 300mm Gravel
TP No. 30 Independence Av	Depth 0 - 300mm Gravel

