MINUTES OF DISCUSSION

BASIC DESIGN STUDY ON
THE PROJECT FOR IMPROVEMENT AND MAINTENANCE OF MAIN ROADS
IN PALESTINE (THE GAZA STRIP)

In response to a request from the Ministry of Public Works of the Executive Authority of the Palestinian Council, the Government of Japan has decided to conduct a Basic Design Study on the Project for Improvement and Maintenance of Main Roads in the Gaza Strip in Palestine (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA")

JICA has sent to Palestine a Basic Design Study Team (hereinafter referred to as "the Study Team") headed by Mr. SASAKI Takahiro, Deputy Director of Second Project Study Div., Grant Aid Project Study Dept., JICA, from June 16 to July 3, 1996.

The Study Team held a series of discussions with the Palestinian officials concerned and conducted a field survey at the study area.

In the course of the discussion and field survey, both parties have confirmed the main items described on the attached sheets. The Study Team will proceed to further works and prepare the Basic Design Report.

Gaza, June 23, 1996

Mr. SASAKI Takahiro
Leader,
Basic Design Study Team,
JICA

Mr. Deef Ala Akhras
Deputy Minister
Ministry of Public Works
P.N.A.

WITNESS
DR. ALI SHAATH
DEPUTY MINISTER ASST
MoPIC

ATTACHMENT

1. Objective

The objective of the Project is to provide appropriate road maintenance equipment which are essential for paved road maintenance activities in order to sustain the road condition, hence to contribute to the social and economical development.

2. Components of the Inception Report

Ministry of Public Works has in principle understood the components of the Inception Report proposed by the Study Team.

3. Responsible Organization and Implementing Agency

Responsible Ministry: Ministry of Public Works.

Implementing Ministry: Ministry of Public Works

4. Maintenance of Equipment

Ministry of Public Works will maintain and use the equipment purchased under the Grant Aid properly and effectively, and to assign the necessary staff members for operation and maintenance of them as well as to bear all the expenses other than those to be borne by the Grant Aid.

Palestinian side will construct garage for equipment purchased under the Grant Aid.

5. Items requested by the Ministry of Public Works

The items requested by the Ministry of Public Works are listed in ANNEX I. However, the final components of the Project will be subject to further studies.

6. Japan's Grant Aid system

1) Ministry of Public Works has understood the system of the Japan's Grant Aid explained by the Study Team; the main feature is described in ANNEX II.
2) Palestinian Side will take the necessary measures, described in ANNEX III for the smooth implementation of the Project on condition that the Grant Aid by the Government of Japan is extended to the Project.

7. Further Schedule of the Study

1) The Study Team will proceed to further studies in Palestine until July 3, 1996.
2) Based on the results of the field study, JICA will complete the Basic Design Study Report and forward it to the Ministry of Public Works around October, 1996.

8. Others

1) Ministry of Public Works requests the Study Team to procure the pre-fabricated materials in order to construct training and administration facilities and ensures that it promptly prepares the site and erects the facility to be constructed by its procured materials.

2) Ministry of Planning and International Cooperation and Ministry of Public Works request dispatch of advisers for the Project, to enhance the sustainability of the Project in the technical and managerial aspects.

ANNEX 1:

ITEMS REQUESTED BY THE MINISTRY OF PUBLIC WORKS

	Equipment	Specification	Quantity	Remarks
1	Bulldozer	160-180 HP	1	
2	Excavator	125-135 HP	1	
3	Wheel Loader	160-170 HP	2	
4	Motor Grader	150-160 HP	2	
5	Dump Truck	8-10 ton	9	
6	Water Tanker	8,000 ltr	1	
7	Fuel Tanker	8,000 ltr	1	
8	Truck Crane	25 ton	1	
9	Mobile Workshop	8 ton	1	
10	Small Service Car	1 ton	1	
11	Vibration Roller	10 ton	2	Static Weight
12	Hand Guide Roller	600 kg	3	
13	Tyre Roller	8 ton	1	20 tons with Ballast
14	Asphalt Finisher	2.3 Std--4m Max	1	
15	Asphalt Distributor	6,000 ltr	1	
16	Plate Compactor	70 Kg	3	
17	Rummer	60 Kg	1	
18	Cargo Truck	8 ton	1	W/ 3 ton Crane
19	Trailer Truck	30 ton	1	
20	Air Compressor	7m3/ min	1	
21	Pick Hammer	6 Kg/cm2	2	
22	Concrete Mixer	0.5 m3	3	
23	Asphalt Kettle	6m3	3	
24	Tools & gauges		1 set	
25	Soil, Materials & Asphalt Testing Laboratory Equipment		1 set	
26	Spare Parts & Shelves	a-For Const. equ b- For Others	Max 15% of the value Max 5% of the value	
27	Pre Fabricated Material For the Facilities	300m2	1 set	
28	Training Aid		1 set	minimum requirements

ANNEX II : JAPAN GRANT AID SCHEME

1. Grant Aid Procedure

1) Japan's Grant Aid Program is executed through the following procedures.

Application	(Request made by a recipient country)
Study	(Basic Design Study conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan & Approval by the Cabinet)
Determination of Implementation	(The Notes exchanged between the Government of Japan and the recipient country)

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using Japanese consulting firms.

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on the requested project (hereinafter referred to as "the Project"), is to provide a basic document necessary for the appraisal of the Project by the Government of Japan.
The contents of the Study are as follows:

a) confirmation of the background, objectives and benefits of the requested project and also institutional capacity of agencies concerned of the recipient country necessary for the project's implementation;
b) evaluation of the appropriateness of the project to be implemented under the Grant Aid Scheme from the technical, social and economic points of view;

c) confirmation of items agreed on by both parties concerning the basic concept of the Project;
d) preparation of a basic design of the Project; and
e) estimation of costs of the Project

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For the smooth implementation of the Study, JICA uses a consulting firm selected through its own procedure (competitive proposal). The selected firm participates in the Study and prepares a report based upon the terms of reference set by JICA.

At the beginning of implementation after the Exchange of Notes, for the services of the Detailed Design and Construction Supervision of the Project, JICA recommends the same consulting firm which participated in the Study to the recipient country, in order to maintain the technical consistency between the Basic Design and Detailed Design as well as to avoid any undue delay caused by the selection of a new consulting firm.

3. Japan's Grant Aid Scheme

1. What is Grant Aid?

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principle in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the project, period of execution, conditions and amount of the Grant Aid, etc., and confirmed.

3) "The period of the Grant" means the one fiscal year which the Cabinet approves the project for. Within the fiscal year, all procedure such as exchanging of the Notes,

concluding contracts with consulting firms and contractors and final payment to them must be completed.

However, in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two governments.

4) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However, the prime contractors, namely consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality).

5) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability of Japanese taxpayers.

6) Undertakings required to the Government of the recipient country

a) to secure a lot of land necessary for the construction of the Project and to clear the site;
b) to provide facilities for distribution of electricity, water supply, drainage and other incidental facilities outside the site;
c) to ensure prompt unloading, tax exemption and customs clearance at ports of disembarkation in the recipient count and internal transportation therein of the products purchased under the Grant Aid.
d) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts.
e) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.
f) to ensure that the facilities constructed and products purchased under the Grant be maintained and used properly and effectively for the Project, and
g) to bear all the expenses other than those covered by the Grant, necessary for the Project.

7) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all the expenses other than those covered by the Grant Aid.

8) "Re-export"

The products purchased under the Grant Aid shall not re-exported from the recipient country.

9) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts.
b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of recipient country or its designated authority.

ANNEX III: UNDERTAKINGS BY THE EXECUTIVE AUTHORITY OF THE PALESTINIAN COUNCIL

The Executive Authority of the Palestinian Council will take necessary measures as agreed in the bilateral agreement;

1. to ensure prompt customs clearance and transportation therein of the products purchased under the Grant in the West Bank and the Gaza Strip.

2. to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the West Bank and the Gaza Strip with respect to the supply of the products and services under the Verified Contracts;

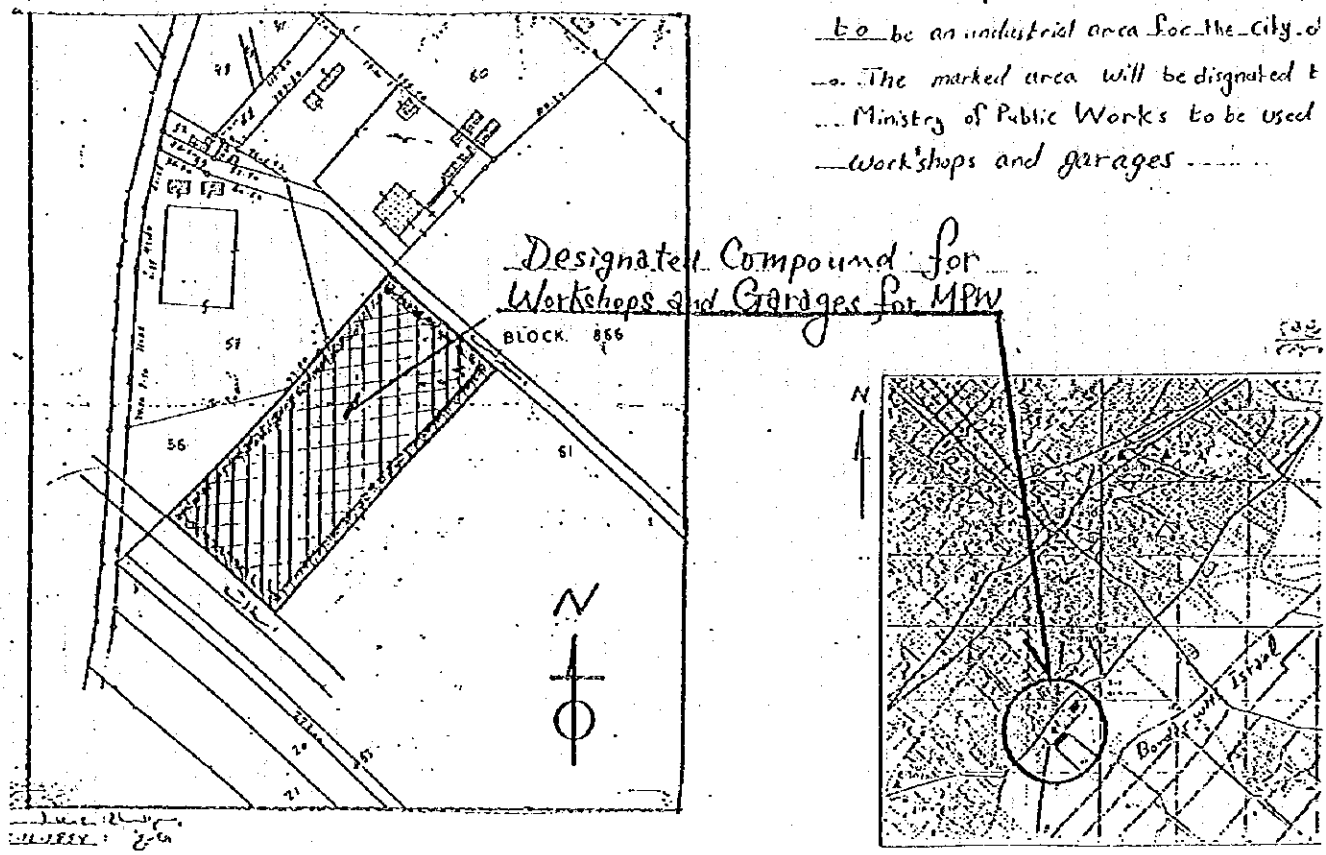
3. to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts such facilities as may be necessary for their entry into the West Bank and the Gaza Strip and stay therein for the performance of their work;

4. to ensure that the products purchased under the Grant be maintained and used properly and effectively for the execution of the Project; and

5. to bear all the expenses, other than those covered by the Grant, necessary for the execution of the Project.

LOCATION OF PROJECT

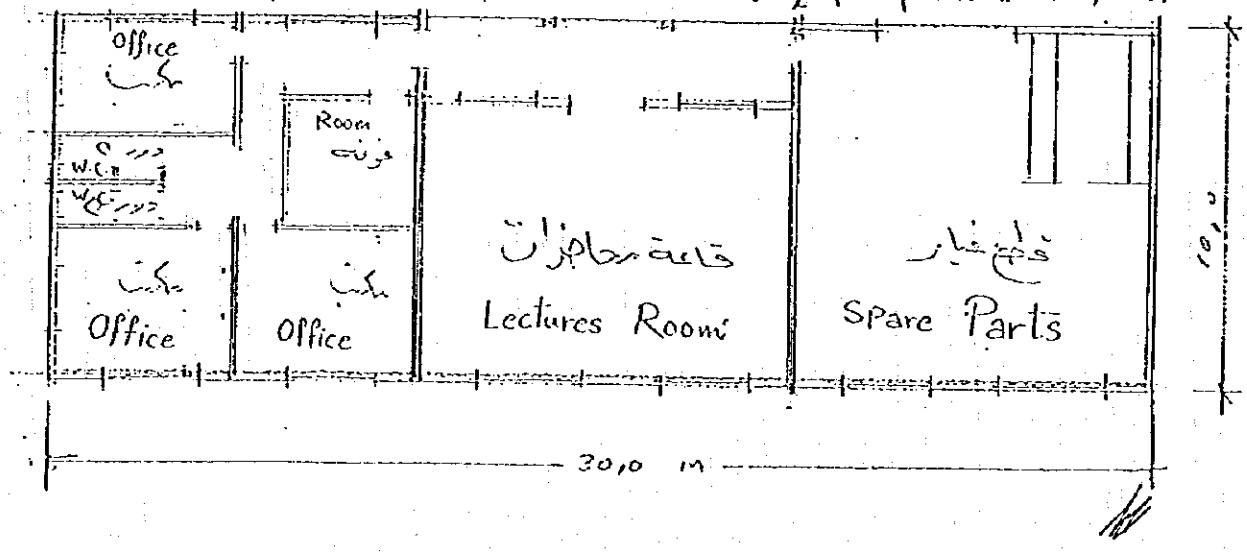
This site is awaiting the final app
From the department of Urban develop
to be an industrial area for the city of
The marked area will be dignated t
Ministry of Public Works to be used
Workshops and garages .....



Training & Administration Facility

1:200

Proposed Facility for Lectures Room & Spareparts Stocks, etc.



5. Cost Estimation Borne by the Recipient Country

Operating cost consists of the items below:

(1) Operating cost of the base camp facilities
(2) Labour cost (new employees)

1) Operating Cost of the Base Camp Facilities

(1) Operating cost of the facility is including the electric for camp, fuel and lubricating oil cost for the equipment.

Fuel	US$466,241/year
Lubricating oil	US$9,472/year
Electric	US$1,000/year
Total	US$476,713/year

(2) Maintenance cost

Maintenance cost for equipment	US$256,424/year

2) Labour Cost

Labour cost was calculated as a fixed cost on the assumption that secures the necessary labour employment with an operation aim.

Labour cost	US$138,00/year

6. Other Relevant Data

その他のデータ 1

MATERIALS & CONCRETE LAB PRICE LIST:

Item No.	Test	Unit Price N.I.S.	Remarks
1	Unit weight of aggregate	25	
2	Organic impurities of fine aggregate	35	
3	Soundness of aggregate	300	
4	Materials finer than sieve #200 in aggregate	25	
5	Specific gravity and absorption of aggregate	40	
6	Abrasion of coarse aggregate (Los Angeles)	150	
7	Sieve analysis of aggregate	40	
8	Clay lumps of aggregate	40	
9	Flakiness index of coarse aggregate	80	
10	Elongation index of coarse aggregate	80	
11	Impact value for coarse aggregate	80	
12	Crushing value for coarse aggregate	80	
13	Ten percent value for coarse aggregate	80	
14	Cylinder capping (Sulfur)	15	
15	Compressive strength of concrete cylinders	15	
16	Slump test	15*	
17	Air content of fresh concrete samples	50*	
18	Schmidt hammer test	20/point*	Minimum 5 points
19	Concrete mix design	600	
20	Concrete trial mix	300	
21	Compressive strength of concrete cubes	10	
22	Extracting and testing of concrete core samples	*	Price depends on number,size & place of samples
23	Compressive strength of concrete blocks	45	
24	Absorption of concrete blocks	40	
25	Flexural strength of cement tiles	60	
26	Absorption of cement tiles	40	
27	Physical analysis of cement	550	Including compressive strength,fineness, setting time (initial & final) & soundness

- * Transportation to be provided by the client for all insite testing.
- All prices do not include V.A.T.

28- Core Sample from Curbs (60)
29- Extracting of cube from Silicate Bricks (30)
30 - Flextural strength & Absorbtion of tiles (150) for (5) tiles (Not encloded Abration

The Result Of Marshall Test

Client : *Rizeq Sons Company*
Project : *Gaza Airport - Layer 3 - Wearing Course (1/2")*
Location : *Gaza*
Sample No. : 1
Date : *22/6/1996*

Bitumen Content as a percentage of total mix = 5.68

Test			Sample No.			Average	Limits
			A	B	C		
Weight In Air		gm	1179.5	1190.5	1197.9		
Weight In Water		gm	675.5	677.3	686.6		
Second Weight In Air		gm	1180.6	1191.1	1198.5		
Volume		cm^3	505.1	513.8	511.9		
Unit Weight		gm/cm^3	2.335	2.317	2.340	2.331	
Stability Reading (divisions -50kN)			460	445	482		
Stability		kg	2150.54	2080.41	2253.39		
Stability Correction Factor			1.04	1.00	1.00		
Corrected Stability		kg	2236.56	2080.41	2253.39	2190.12	*1100*
Flow reading (0.001")			100	80	85		
Flow		mm	2.54	2.03	2.16	2.24	*(2 - 4)*
G_{mm}	(Maximum unit weight)		2.445	2.445	2.445	2.445	
V.M.A		%	17.51	18.15	17.33	17.66	
V.T.M	(Air Voids)	%	4.50	5.25	4.30	4.68	*(3 - 5)*
V.F.B.		%	74.27	71.10	75.18	73.52	

Remarks :

* **All limits are according to Gaza Airport Specs.**
* **75 blows were used in compaction on each face.**

Tested by

Essam Saad

Checked by
Mohamed Salah
Eng. Mohamed Salah

The Result of Loss of Marshall Stability Test
Military Standards - 620A

Client : *Rizeq Sons Company*
Project : *Gaza Airport (Wearing Course - 1/2")*
Location : *Gaza*
Layer : *3*
Sample No. : *1*
Date : *22/6/1996*

Bitumen Content to the total mix (%) = 5.68

Test			Sample No.			Average	Limits
			A	B	C		
Weight In Air		gm	1198.7	1203.4	1192.6		
Weight In Water		gm	688	688.1	683.4		
Second Weight In Air		gm	1202.1	1205.9	1194.2		
Volume		cm^3	514.1	517.8	510.8		
Unit Weight		gm/cm^3	2.332	2.324	2.335	2.330	
Stability Reading (divisions-50 kN)			430	460	445		
Stability		kg	2010.25	2150.5	2080.38		
Stability Correction Factor			1.00	1.00	1.00		
Corrected Stability		kg	2010.25	2150.5	2080.38	2080.38	1100
Original Stability		kg				2190.12	
Percentage of Loss of Stability						*94.99*	> 85 %
Flow reading (0.001")			118	95	120		
Flow		mm	3.00	2.41	3.05	2.82	(2 - 4)
G_{mm}	(Maximum unit weight)		2.445	2.445	2.445	2.445	
V.M.A		%	17.63	17.90	17.52	17.69	
V.T.M	(Air Voids)	%	4.65	4.96	4.52	4.71	(3 - 5)
V.F.B.		%	73.64	72.30	74.20	73.38	

Remarks :

* **All limits are according to Gaza Airport Specs.**
* **75 blows were used in compaction on each face.**

Tested by

Essam Saad

Checked by
Mohamed Salah
Eng. Mohamed Salah

Compressive Strength of Bituminous Mixtures

ASTM D 1074 - 03

Client : *Rizeq Sons Company*
Project : *Gaza Airport - Layer 3 - Wearing (1/2")*
Location : *Gaza*
Sample No. : 1
Date : *22/6/1996*

Test		Sample No.			Average	Limits
		A	B	C		
Maximum Load	kN	54.30	48.16	48.96		
Maximum Load	kg	5538.6	4912.32	4993.92		
Area of specimen	cm^2	78.53	78.53	78.53		
Compressive Strength	kg/cm^2	70.53	62.55	63.59	65.56	*60.0 kg/cm^2*

Remarks :

* All limits are according to Gaza Airport Specs.
* A pressure of 163 kN was used in compaction of specimen for 2 minutes.
* All Samples were cured at 18 C.

Tested by

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Checked by
Mohamed Salah
Eng. Mohamed Salah

MISR RAYMOND FOUNDATIONS

شركة عثمان والغزا
المساهمة المصرية المحدودة
مصر ريموند للاساسات

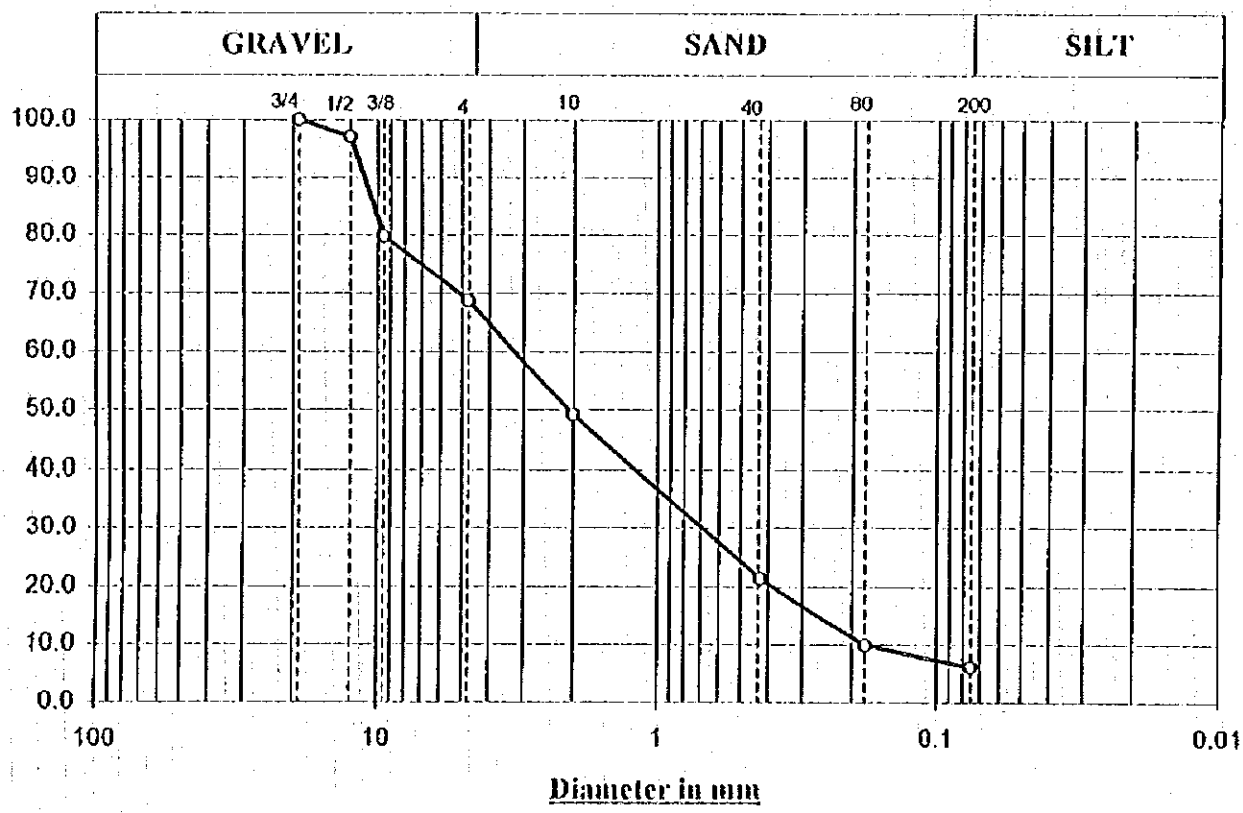
GRAIN SIZE DISTRIBUTION

Bitumen Extraction (ASTM D 2172)

Client : *Rizeq Sons Co.*
Project : *Gaza Airport*
Sample : *1*

Date : *22/6/1996*
Layer : *Wearing Course*
Layer 3 - 1/2"

Bituminous Content by weight of total Mix = 5.68 % Limits = 5.3 - 5.8 %
Bituminous Content by weight of total Agg. = 6.02 %



Item	Sieve Size	1.5"	1"	3/4"	1/2"	3/8"	4	10	40	80		200
	Diameter (mm)	37.5	25	19	12.5	9.5	4.75	2	0.425	0.18		0.075
1	% Passing			100.0	97.0	79.7	68.7	49.1	21.3	9.8		6.2
Limits	Min.			100	100		55	35	15	5		3
	Max.						75	55	30	20		8

Note : Limits were taken according to Gaza Airport Specs.

Tested By

Essam Saad

Checked By
Mohamed Salah
Eng. Mohamed Salah

GAZA - El Remal El Ganouby - Behind Islamic University - U.N. Enterance - Nile Co. Tower
Tel: Fax :

غزة - الرمال الجنوبي - خلف الجامعة الإسلامية
مدخل الكالة - برج شركة النيل
ت: فاكس :

7. References

Fig. 7-1 THE GAZA STRIP, INVENTORY OF INTER-URBAN ROADS

Fig. 7-2 THE WEST BANK, INVENTORY OF INTER-URBAN ROADS

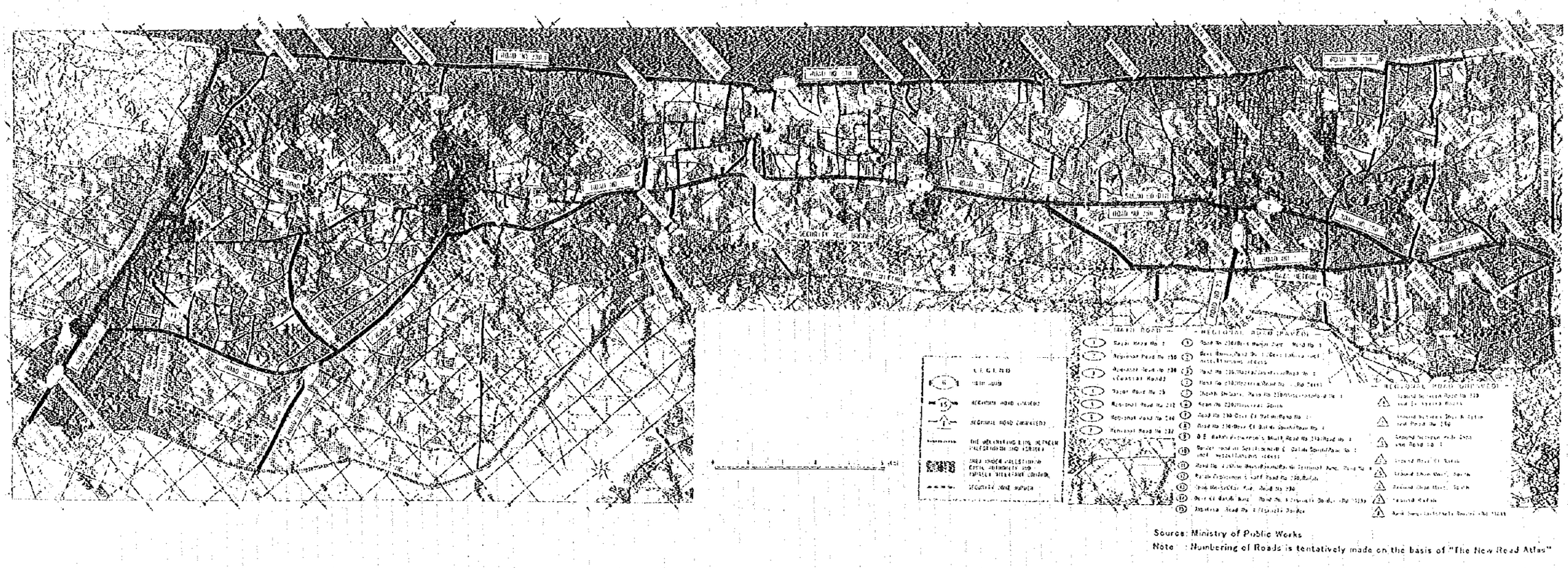
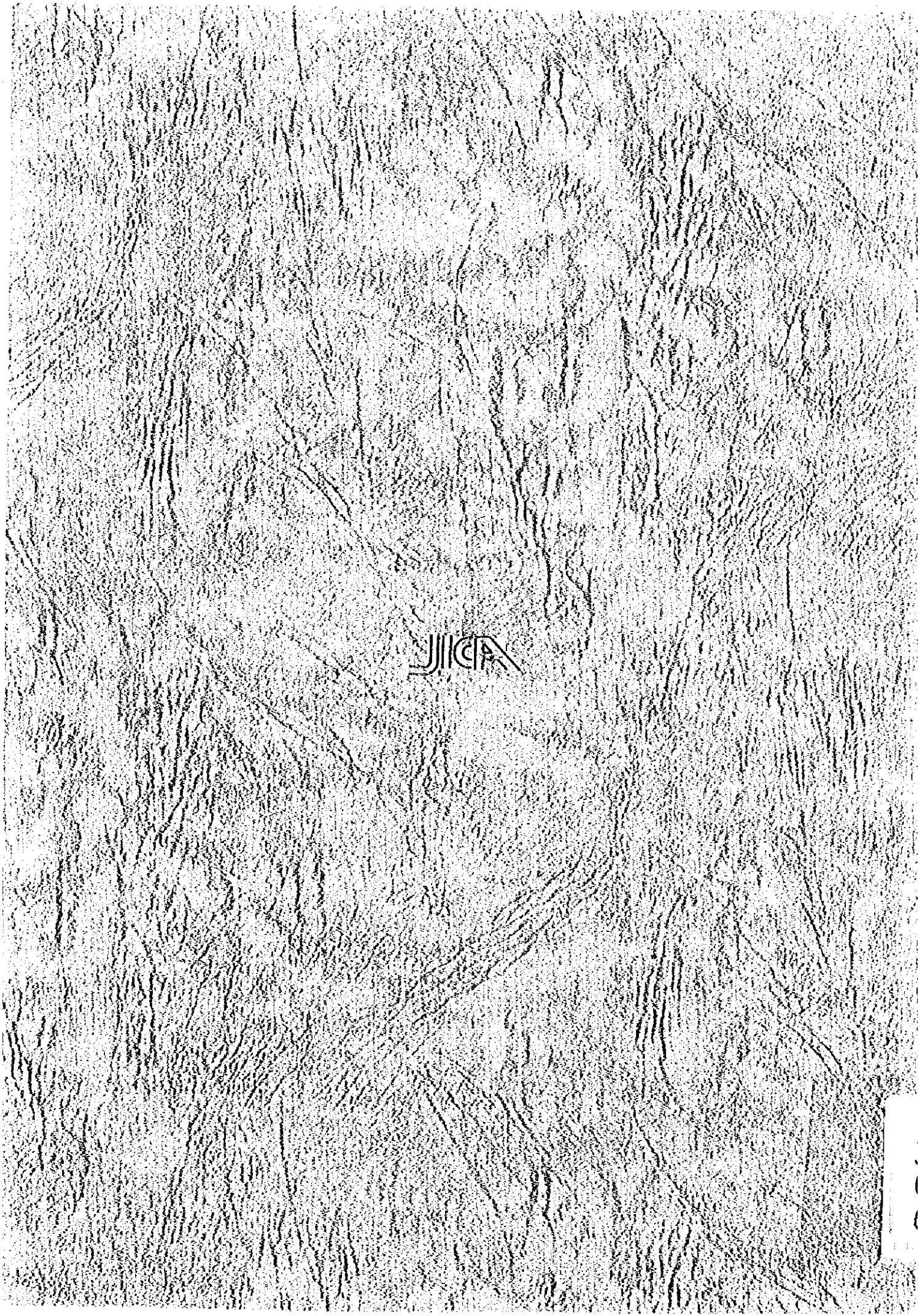


Fig. 7-1 THE GAZA STRIP, INVENTORY OF INTER-URBAN ROADS

Fig. 7-2 THE WEST BANK, INVENTORY OF INTER-URBAN ROADS


JICA