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# **LOCAL DEVELOPMENT II URBAN PROJECT**

Submitted to  
**USAID / CAIRO**

Submitted by  
**WILBUR SMITH ASSOCIATES**

in association with

**PUBLIC ADMINISTRATION SERVICE  
DEVELOPMENT CONSULTING OFFICE**

**DELOITTE AND TOUCHE  
ENGINEERING AND GEOLOGICAL  
CONSULTING OFFICE**

INTERIM REPORT  
on  
O&M IN GIZA  
(January 1992)

PREPARED FOR H.E. THE GOVERNOR OF GIZA

TRANSLATION  
INTERIM REPORT  
on  
O&M IN GIZA

Prepared for H.E. the Governor of Giza

**I. PURPOSE**

1. The LD II (Urban) Project placed great emphasis on O&M in six key urban governorates. The intensive technical assistance provided by TAC will be terminated by end of June 1992. It is therefore considered essential to report to H.E. the Governor of Giza on the current O&M status, achievements and problems, in order to give a clear actual picture of Giza fleets and needs to keep these fleets in good order.
2. Main topics in this report include:
  - 2.1 Garages and workshops construction and renovation program
  - 2.2 Development of the organization and staffing of a complete and effective O&M hierarchy in the Governorate
  - 2.3 Garages and workshops management
    - Preventive Maintenance (PM) planning and programs;
    - Repair planning and programs;
    - Shop equipment and tools;
    - Annual financial needs to keep an 80% fleet availability; and
    - Spare parts warehousing systems.
  - 2.4 Income generation and privatization
  - 2.5 TAC support
  - 2.6 Conclusions and recommendations

**II. GARAGES AND WORKSHOPS CONSTRUCTION AND RENOVATION PROGRAMS**

1. Both GCBA and Giza City own huge fleets consisting of more than 750 vehicles and engineering equipment. GCBA and Giza City have only two inadequate garages in Bein El-Sarayat and Imbaba. A construction and renovation program was therefore developed for the renovation of existing garages and the construction of new facilities. The problem was to find adequate sites for new facilities. Finally a site adjacent to the Giza composting plant was assigned. This is nearby the Cairo - Alexandria Desert Road (Km. 26).
2. The construction and renovation program was developed in three phases as follows:

Phase I Includes

Renovation of Giza City Garage in Imbaba. An amount of L.E. 114,950 was allocated for the renovation and the construction of a service station, and L.E. 130,000 for the procurement of shop equipment and tools. Unfortunately, the service station is not working as some defects appeared in the construction and problems with the contractor have not yet been solved.

- Renovation of GCBA Garage in Bein El-Sarayat. L.E. 791,995 were allocated for renovation; and L.E. 60,000 were allocated for procurement of shop equipment and tools. The garage still needs more renovations and upgrading however, and this may take place in phase 3 after the completion of the GCBA new facility by the desert road.
- A modern repair workshop adjacent to the Giza City Council was also built to perform simple and running repairs for the city transport fleet. An amount of L.E. 277,491 was allocated for this purpose.

### Phase II

Included the construction of a big modern facility for GCBA. This facility has:

- An adequate parking area for GCBA fleet and heavy vehicles and equipment;
- A refueling and servicing station;
- A zonal workshop to perform running and medium repairs (levels 1 and 2) and level 4 P.M.;
- A central workshop to perform major repairs; and
- A main spare parts warehouse.

L.E. 1,331,000 was allocated, and the construction of the facility is expected to be completed by the end of February 1992. More funding is needed for effecting payments to the consultant and the contractor; and for the procurement of shop equipment, tools, furniture, shelves and bins for the spare parts warehouses, etc. Funding needs were detailed in TAC's report to H.E. the Giza Governor dated December 1, 1991. A copy of this report is attached (Appendix A).

### Phase III

May include the following:

- The construction of new GCBA facility to the south of El-Haram Street (may be in Beni Yusef) to be used for parking the fleet serving the southern part of Giza City and provide simple and running repairs (level 1) and P.M. Cost estimate for the construction and equipping of this facility is L.E. 1.5 millions approximately.
- Upgrading of Bein El-Sarayat facility. Approximate estimate is L.E. 700,000.

Table 1 shows the status of the three phases of the construction and renovation programs.

## **III ORGANIZATION AND STAFFING OF THE O&M HIERARCHY**

1. Two years ago, when the decision was taken to construct the new facility by the desert road, several meetings were held with GCBA officials to develop an organization for the new facility. TAC provided GCBA with adequate proposals and job descriptions for nearly all jobs needed to run the new facility. Governorate DOA officials were involved in these meetings. Construction of the new facility is about to be completed but formal ratification of an adequate organization has not yet been received. Accordingly, no new vacancies are created and staffing is likely to be a real problem.
2. Early in 1991, an O&M needs seminar was held in Giza Governorate. TAC proposed the formation of a Central Maintenance Dept. within the organization of GCBA.

The Central Maintenance Department would be responsible for planning, coordinating and controlling all maintenance activities. The huge GCBA fleet and the big maintenance facilities need a governing body within GCBA. A spare parts control system should be created to ensure continuous flow of spare parts and to control the use of spare parts.

Table 1

CURRENT GARAGES & WORKSHOPS  
CONSTRUCTION & RENOVATION PROGRAM  
IN GIZA GOVERNORATE

## PHASE I

ZONAL/DISTRICT GARAGE	ZONE	CONTRACTED COMPLETION DATE	UTILIZATION DATE	
			ANTICIPATED	ACTUAL
Upgrading of Central Workshop	Governorate	March 1987		September 1989
Upgrading of Imbaba Garage	City Council	Utilized (Fuel Station) June 1990	Washing and lubrication facility is still unusable due to construction defects.	

## PHASE II

Desert Road Garage	Governorate	December 1991	March 1992	
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## PHASE III

ZONAL/DISTRICT GARAGE	ZONE	PROPOSED SITE	TYPE OF WORK	COST ESTIMAT. L.E.
GCBA to serve south Giza City	Governorate	Not assigned	New construction	2,000,000
GCBA	Governorate	Bein El-Sarayat	Upgrading	700,000

3. Shortage of capable managers, engineers, supervisors, mechanics and semi-skilled labor could badly affect the O&M activities. Current wages and the low incentive payments do not attract qualified managers, engineers and skilled labor to be employed in GCBA.
4. To occupy the new West Giza Complex (the Cairo - Alexandria Desert Road Garage) and run it in good and efficient order, an able powerful management team should be formed. The urgent needs in managers, senior and junior engineers and their qualifications are stated in TAC's Report (Appendix A).

#### IV. MAINTENANCE MANAGEMENT

##### 1. Preventive Maintenance (PM)

In Bein El-Sarayay Garage, PM programs have been developed but not implemented at a good rate, because the garage is very crowded and lacks sufficient staff and spare parts. Performing regular PM for vehicles and equipment has proven very effective, and has had excellent impact on improving fleet availability. The number of simple, current and medium repairs has also decreased substantially.

##### 2. Repair Programs

- 2.1 The central workshop in Bein El-Sarayay garage is the only workshop performing all repair levels in GCBA. Due to lack of qualified engineers, skilled labor and spare parts, the workshop is not capable of conducting all of the needed repairs. Major defects in vehicles and equipment have accumulated since 1979. The condition of the defective units is deteriorating, and many pieces need overhauling in specialized dealers workshops.
- 2.2 Repair plans are not implemented successfully because of the above-mentioned reasons; the budget allocation is also insufficient for procurement of imported and locally produced spare parts; and for performing overhauls and major repairs.

##### 3. Shop Equipment and Tools

Bein El-Sarayay workshop lacks some shop equipment and special tools. The new workshops (Central, Zonal and the service station) need to be equipped. As stated in TAC's special O&M Report (attached as Appendix A), an amount of L.E. 700,000 should be allocated for the procurement of shop equipment and tools for both equipping the new facility and upgrading Bein El-Sarayay workshop.

##### 4. Spare Parts Warehousing Systems

- 4.1 "Kardex" warehousing system should be introduced in all GCBA spare parts warehouses, as a pre-requisite for introducing computers.
- 4.2 An effective spare parts inventory control system has to be developed. An adequate continuous flow of spare parts, both imported and local, should be insured. Annual spare parts needs should be defined and adequate funds should be allocated.

##### 5. Actual Fleet Status

- 5.1 The total actual fleet status including various types of pickups and transport vehicles is shown in Table 2. On-the-road availability is almost 59%. Approximately 154 pieces of equipment need either major repairs or complete overhauling in specialized dealers workshops. These are accumulated defects since the first CIP fleet shipment in 1979.
- 5.2 Implementing PM programs regularly will improve the fleet availability and decrease the number of new defects. This would give GCBA workshops the chance to meet new repair needs.

- 5.3 On the other hand, lack of spare parts, qualified garage and workshop managers and skilled laborers will remain the main reason for having accumulated defects.
- 5.4 To upgrade the CIP fleet status, which forms most of GCBA fleet, a special repair program should be developed. This program could be implemented in 2-3 years. Total cost estimate of this program is approximately L.E. 6 millions to return L.E. 70 million worth of equipment to the road.

6. Annual Financial Needs

- 6.1 GCBA and Gizz City own a huge fleet of heavy vehicles and engineering equipment, besides a big number of pickups and transport vehicles. The fleet has a value of approximately L.E. 100 millions according to current Prices. Prices have increased dramatically in the last five years. As an example, a new Truxmore now costs L.E. 150,000 (including customs if purchased from the local dealers), where it costed approximately L.E. 70,000 five years ago (not including customs as it was imported directly by GOE).
- 6.2 To keep this fleet at a reasonable 85% on-the-road availability, 5% of the total current value of the fleet should be spent annually on the procurement of spare parts (both imported and locally produced), and on performing complete overhauls of annual defects. This amounts to about L.E. 5 millions annually.
- 6.3 Accumulated defects will need extra allocations in order to bring defective pieces back on the road again. An approximate estimate for overhauling accumulated defects is L.E. 6 millions, this overhauling program could be implemented in 2-3 years.
- 6.4 The first shipment of the garbage collection and utilities fleet was received in 1979, and the last shipment was in 1987. Aging pieces could be overhauled and their operational lives would be increased. A replacement program does, however, need to be developed and an adequate budget has to be allocated. A minimum of L.E. 10 millions should be allocated annually for replacement procurements.
- 6.5 For the next three years (1992 - 1994), the following annual budget should be allocated.:

- Procurement of imported spare parts for USA made vehicles and equipment (most of the fleet)	L.E. 1,320,000	=	\$ 400,000
- Purchase of local spare parts (tires, batteries, filters, hods, hoses, lights, glass, etc.)	L.E. 1,250,000		
- P.M. and repairs materials (lubricants, paints, steel sections, leather, metal sheets, etc).	L.E. 300,000		
- Overhauling of newly defected vehicles and equipment	L.E. <u>2,130,000</u>		
Total Annual Needs	L.E. 5,000,000		
- Complete overhauling of one third of the accumulated defective vehicles and equipment (for 3 successive years)	L.E. <u>2,000,000</u>		
Grand Total Annual Budget (not including replacement)	L.E. 7,000,000		

Table 2

## INVENTORY &amp; STATUS OF GIZA GOVERNORATE

(As Of January 1992)

VEHICLE/EQUIPMENT NAME	TOTAL	I.O.	NEED REPAIR			AVAIL. %
			LEVEL 1	LEVEL 2	LEVEL 3	
Garbage Collection Truck	143	71	5	6	61	50
Refuse Cart	36	10	2	3	21	28
Loader	24	13	8	2	1	54
Dump Truck	121	67	32	12	10	55
Sweeper	28	11	3	3	11	39
Water Spray Truck	26	17	3	3	3	61
Sewage Truck	36	28	3	3	2	78
Grader	4	3	1	--	--	75
Landfill Compactor	3	2	1	--	--	67
Excavator - J.D.	1	1	--	--	--	100
Dumper	6	2	--	--	4	34
Crane	4	3	1	--	--	75
Tractor	1	1	--	--	--	100
Pickup	72	47	15	6	4	65
Passenger Car	7	6	1	--	--	86
Lorry 3 t	4	2	1	1	--	50
<b>TOTAL</b>	<b>516</b>	<b>284</b>	<b>76</b>	<b>39</b>	<b>117</b>	<b>55</b>

o&amp;n/giza-2/sy

Table 2

## INVENTORY &amp; STATUS OF GIZA GOVERNORATE

(As Of January 1992)

VEHICLE/EQUIPMENT NAME	TOTAL	I.O.	NEED REPAIR			AVAIL. %
			LEVEL 1	LEVEL 2	LEVEL 3	
<u>Vehicles &amp; Equipment of Giza City Council</u>						
Passenger Car	18	13	1	2	2	72
Pickup	115	70	15	15	15	61
Lorry	15	10	2	2	1	67
Lighting Tower	13	11	1	1	--	85
Sewage Truck	1	1	--	--	--	100
Crane	4	3	1	--	--	75
Water Tank Truck	2	1	1	--	--	50
Fork Lift	1	1	--	--	--	100
<b>TOTAL</b>	<b>169</b>	<b>110</b>	<b>21</b>	<b>20</b>	<b>18</b>	<b>65</b>
<u>Road Department</u>						
Dump Truck	28	20	3	1	4	72
Loader	8	5	1	--	2	63
Grader	2	1	--	1	--	50
Roller	22	18	1	1	2	88
Asphalt Cutter	4	4	--	--	--	100
Finisher	1	1	--	--	--	100
<b>TOTAL</b>	<b>65</b>	<b>49</b>	<b>5</b>	<b>3</b>	<b>8</b>	<b>75</b>
<b>GRAND TOTAL</b>	<b>750</b>	<b>443</b>	<b>102</b>	<b>62</b>	<b>143</b>	<b>59</b>

6.6 Financing the above-mentioned maintenance programs needs to gather all available resources to cover all expenditures. Available resources are:

- BAB II and BAB III GOE budgets;
- Cleaning treasuries;
- Local and community development treasuries;
- USAID block grant, and
- LD II maintenance allocations.

In all cases, the Giza City Council and the districts should participate in financing maintenance needs as implementing maintenance programs is for the benefit of the city and the districts.

#### IV. INCOME GENERATION

1. Income generation has become an essential issue. On presenting the FY 1991-1992 GOE budget to the People's Assembly, H.E. the Prime Minister stated that he knew that the BAB II allocations, by no means, will cover actual needs. H.E. added that different GOE units should find ways to generate income to cover part of their needs.
2. The Amreya District Chief, in Alexandria, took the initiative and started a pilot income generation project in the district garage. Maintenance services are being provided to other governmental agencies and to both public and private sectors against payments. The garage management is using the excess capabilities of the service station and the workshop to provide maintenance services after the daily official work hours. On-the-road availability of the district fleet is kept high (80%-83%) and providing services against payments did not lower maintenance of the district fleet. Table 3 shows the income generated since the start of the project in January 1990 up to date. The pilot project is successfully managed and the income generated is mostly spent on maintaining the workshop equipment, purchase of new shop equipment and spare parts, and on paying reasonable incentives to the garage staff.
3. In 1991, TAC arranged a visit to different similar projects in Menia and Menofia governorates. Giza Governorate officials took part in this visit.
4. Hopefully, income generation projects could be started in O&M facilities in Giza, especially in the new complex when it is equipped and staffed. The complex is in an industrial area lacking maintenance facilities.

#### V. TAC SUPPORT TO GIZA

The TAC O&M Team provided direct intensive support in all areas. Close cooperation with concerned officials at the Governorate-level, the City Council and GCBA was fruitful. TA included:

##### 1. Construction and Renovation Programs

O&M Team took a leading role in planning this program, preparation of garage layouts and the monitoring of the construction (both technically and financially).

##### 2. Organization and Staffing

The O&M Team, in cooperation with GCBA officials proposed organizations for different O&M facilities in GCBA defining responsibilities of each facility and proposed an effective communication system. All these proposals were accepted by GCBA and the Governorate DOA. GCBA is still awaiting the formal ratification of COAO.

Table 3  
 AHREYA GARAGE PILOT PROJECT  
 INCOME GENERATED BALANCE  
 FROM APRIL 1, 1990 TO SEPTEMBER 31, 1991

P E R I O D	TOTAL INCOME IN L.E.	GARAGE EXPENSES		INCENTIVE PAYMENTS		NET PROFIT IN L.E.
		in L.E.	% of Total Income	in L.E.	% of Total Income	
April 1, 90 - June 30, 90	5,445.00	89.75	1.65	862.00	15.83	4,493.25
July 1, 90 - Sept. 30, 90	10,087.75	7,496.00	74.31	1,422.50	14.10	1,169.25
Oct. 31, 90 - Dec. 31, 90	14,027.00	7,943.00	56.63	1,900.95	13.55	4,183.05
Jan. 1, 91 - March 31, 91	19,152.97	6,997.03	36.53	5,099.55	26.63	7,056.39
April 1, 91 - June 30, 91	24,233.97	19,199.10	79.23	5,279.10	21.78	- (244.23)
July 1, 91 - Sept. 30, 91	27,238.50	5,458.60	20.00	4,724.15	17.34	17,055.75
TOTAL	100,185.19	47,183.48	47.01	19,288.25	19.25	33,713.46

NB Total net income means the total income minus cost of materials used in repairs

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3. Direct Management Support

TA was provided to GCBA and garage managers. On the completion of the new West Giza Complex, TAC will assign a senior maintenance expert to provide management and technical assistance on day-by-day basis.

4. Procurement of New Equipment and Spare Parts

The O&M Team assisted the GCBA management in preparing and reviewing specifications for purchase of new tools and equipment. The O&M Team also assisted in preparing spare parts lists, part descriptions and numbers of the needed spare parts.

5. Training

The TAC placed great effort on training both in Egypt and in the USA. Training included seminars, visits, courses and OJT. Table 4 shows the different courses that have been held and the number of trainees.

VI. CONCLUSIONS AND RECOMMENDATIONS

1. Garages and Workshops Construction and Renovation Program

After the completion of the second phase of the construction program (Giza West Complex), Phase III should start. Upgrading of Bein El-Sarayut Garage and workshops; and the construction of a new O&M facility to serve the southern part of the Giza City are real needs.

2. Organization and Staffing

- 2.1 A central maintenance department should be formed within GCBA to plan, coordinate and control maintenance activities in GCBA.
- 2.2 Formal ratification of proposed organizations for GCBA and Giza City Council is a must to create new vacancies to employ needed staff.
- 2.3 The shortage of qualified managers, engineers, supervisors, skilled and semi-skilled labor is a serious problem that should be dealt with.

3. Maintenance Management

- 3.1 On-the-road availability and the technical condition of GCBA and the Giza City fleets need to be upgraded. PM and repair programs should be implemented efficiently. Continuous supply of spare parts must be ensured. An effective spare parts control system has to be built.
- 3.2 O&M annual needs should be pre-planned annually. All financial resources should be gathered together in order to cover the GCBA and the City Council grand annual O&M plans.
- 3.3 The CIP fleet procurements provided most of the garbage collection and utilities vehicles and equipment. The fleets started to be received in 1979 and it now need to start implementing a replacement program.

4. Income Generation

- 4.1 Income generation has become an essential issue.
- 4.2 El-Amreya pilot project (Alexandria) is a good example of income generation that could be repeated in Giza. Necessary modifications and new ideas could be introduced.

Table 4

## TRAINING EFFORT IN GIZA

(As of End Of December 1991)

ITEM	COURSE TITLE	TYPE OF TRAINING	COURSE DURATION IN DAYS	NUMBER OF TRAINEES	NUMBER OF TRAINEE DAYS
1	Garages Operation	Off-Shore in USA	15	2	30
2	Garages Management	Off-Shore in USA	15	2	30
3	P.M. Training for Different Types of Vehicles and Engineering Equipment	OJT in Garages	3	140	420
4	Cummins Engine Overhaul and Testing	OJT in ADAICO	10	3	30
5	Procurement Management	Local Course	10	12	120
6	Vehicles/Equipment Operation	PVTD Course	6	4	24
7	Management Garages	PIMCO Course	18	4	72
8	Automatic Transmission	TOMO HAR	6	6	36
9	Procurement Workshop	Local Course	5	7	35
10	Quality Control - Mechanical	PVTD Course	25	1	25
11	Maint. of Vehicles Electric.	PVTD Course	18	7	126
12	Maint. Diesel Engines	PVTD Course	24	6	144
13	Vehicle Workshop Foremen	PVTD Course	36	6	216
14	Maint. of Petrol Engine	PVTD Course	24	3	72
15	Maint. of Transmission	PVTD Course	36	1	36
16	Tool Room Operator	PVTD Course	18	3	54
17	Electric & Oxy-Welding	PVTD Course	24	2	48
18	Car Sheet Metal Work	PVTD Course	36	2	72
19	Electric Workshop Foremen	PVTD Course	36	2	72
20	Purchasing and Storekeepers	PVTD Course	24	3	73
21	Gear Cutting	PVTD Course	24	2	48
	TOTAL		413	218	1782

APPENDIX A

REPORT TO GIZA GOVERNORATE  
ON CONSTRUCTION OF GCBA COMPLEX  
IN WEST GIZA

# LOCAL DEVELOPMENT II URBAN PROJECT

1097 CORNICHE EL NIL ST., GARDEN CITY . CAIRO, EGYPT . 355 7078 . 355 7933 . FAX 356 4294

## TRANSLATION

December 1, 1991

Major General Moustafa Mansour  
Secretary General  
Giza Governorate

Local Development II (Urban) Project  
Construction of GCBA Complex in West Giza

Dear Sir:

I have the pleasure to inform you that the construction of the new GCBA complex in West Giza (The Cairo, Alexandria Desert Road Garage) is progressing well; the expected completion date being the end of December 1991.

Following discussions with the GCBA staff, I am also pleased to enclose the attached report to illustrate (i) the pre-occupation measures that should be taken and (ii) the proposed occupation schedule. When the GCBA is ready to occupy the new complex, I will assign a maintenance expert to provide technical assistance to the staff of the complex.

Thank you for cooperation, and my best regards.

Sincerely,

WILBUR SMITH ASSOCIATES



Richard E. Miller  
Chief of Party

cc Mr. Mohamed Hassan, GCBA Chairman  
Mr. Jack Gisiger, USAID  
Mr. Saad Kamel, PIC  
General Fouad Sultan, O&M

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WILBUR SMITH ASSOCIATES

DELOITTE AND TOUCHE  
DEVELOPMENT CONSULTING GROUP

PUBLIC ADMINISTRATION SERVICE  
ENGINEERING AND GEOLOGICAL  
CONSULTING OFFICE

## TRANSLATION

### SPECIAL O&M REPORT ON THE GCBA COMPLEX IN WEST GIZA OCCUPATION OF THE CAIRO-ALEXANDRIA DESERT ROAD GARAGE

The construction of the GCBA complex in West Giza is about to be completed. Expected completion date is the end of December 1991. Although construction of the complex is progressing well, there are some problems that have to be solved urgently; (mainly electricity and water supplies). The occupation of the facility has to be well planned and several pre-occupation measures have to be taken.

#### PRE-OCCUPATION MEASURES

##### 1. Organization

Several meetings have been held in the GCBA to develop a proposed organization for the new facility and job descriptions were also developed. The proposed organization has however not yet been ratified. The GCBA should get proposed organization ratified by the COAO to create vacancies to employ the needed staff.

##### 2. Staffing

The complex needs an able powerful management team and an able qualified senior engineer should be assigned as the complex manager. The GCBA is also in great need of qualified engineers, supervisors and skilled laborers in different trades to run the facility. The following table shows the urgent need for engineers to start up the facility.

QUALIFICATION	ASSIGNMENT	MIN. NO NEEDED
Senior mechanical engineer (min. 20 year experience)	Complex Manager	1
Senior Mechanical Engineer (10-15 year experience)	Central Workshop Manager	1
	Zonal Workshop Manager	1
	Diesel Engineer Workshop Manager	1
Junior Mechanical Engineers (5-7 years experience)	Central Workshop Engineers	2
	Zonal Workshop Engineer	1
	Service Station Manager	1
Spare Parts Engineer (mechanical 5-7 years experience)	Spare Parts Manager	1
Junior Engineer (5 years experience)	Garage Operations Manager	1

3. Shop Equipment and Tools

A list of needed shop equipment and tools has been prepared by GCBA and reviewed by TAC. The Estimated cost of the needed shop equipment, other than that available in Bein El Sarayat Garage, is L.E. 700,000. Specifications and quantities are ready for the bidding process. A general layout of the different workshops showing where shop equipment, tools and furniture should be located according to the sequence of repairs, should be prepared prior to erection of the equipment. Foundations for heavy shop equipment and electrical mains should be fixed before finishing work on the floors in the various workshops.

4. Spare Parts Warehouse

Prior to transfer of spare parts from the GCBA main warehouse to the new facility, the new warehouse should be equipped with shelves, bins, Cardexfiles, Cardexcards and bin cards, benches and needed furniture. Cost estimate is L.E 75,000 approximately.

5. Furniture

The Giza West Complex is in need of furniture for the different offices. These include the Headquarter the various workshops, the service station ... etc. An amount of L.E. 50,000 is needed for procuring adequate furniture (or manufacturing needed items in GCBA workshops).

6. Financial Needs and Resources

6.1 To date an amount of L.E. 2.4 millions has been spent on the construction of the new facility, the remaining sums needed are as follows:

Interim payments to contractor (claimed but not paid)	L.E 450,000
Completion of construction	L.E 300,000
Furniture	L.E 50,000
Equipping the spare parts warehouse	L.E 75,000
Procurement of shop equipment and tools	L.E 700,000
	<hr/>
Total financial needs	L.E 1,575,000

6.2 Available resources are

- o USAID Block Grant
- o Cleaning treasury GCBA
- o Services treasuries in Giza City and in the Governorate.

OCCUPATION SCHEDULE

Occupation of the new complex could be scheduled in stages according to availability of shop equipment, tools and staff. The following schedule may be adequate:

Stage I January 1992

1. Transfer of vehicles and equipment serving the western part of Giza City and most of the GCBA heavy vehicles and equipment.
2. Operate the service station including refueling, servicing, tires and battery repairs.

**Stage II** February 1992

1. Transfer of the Zonal Workshop and the body work workshop.
2. Transfer the main spare parts warehouse and build up the cardex system.

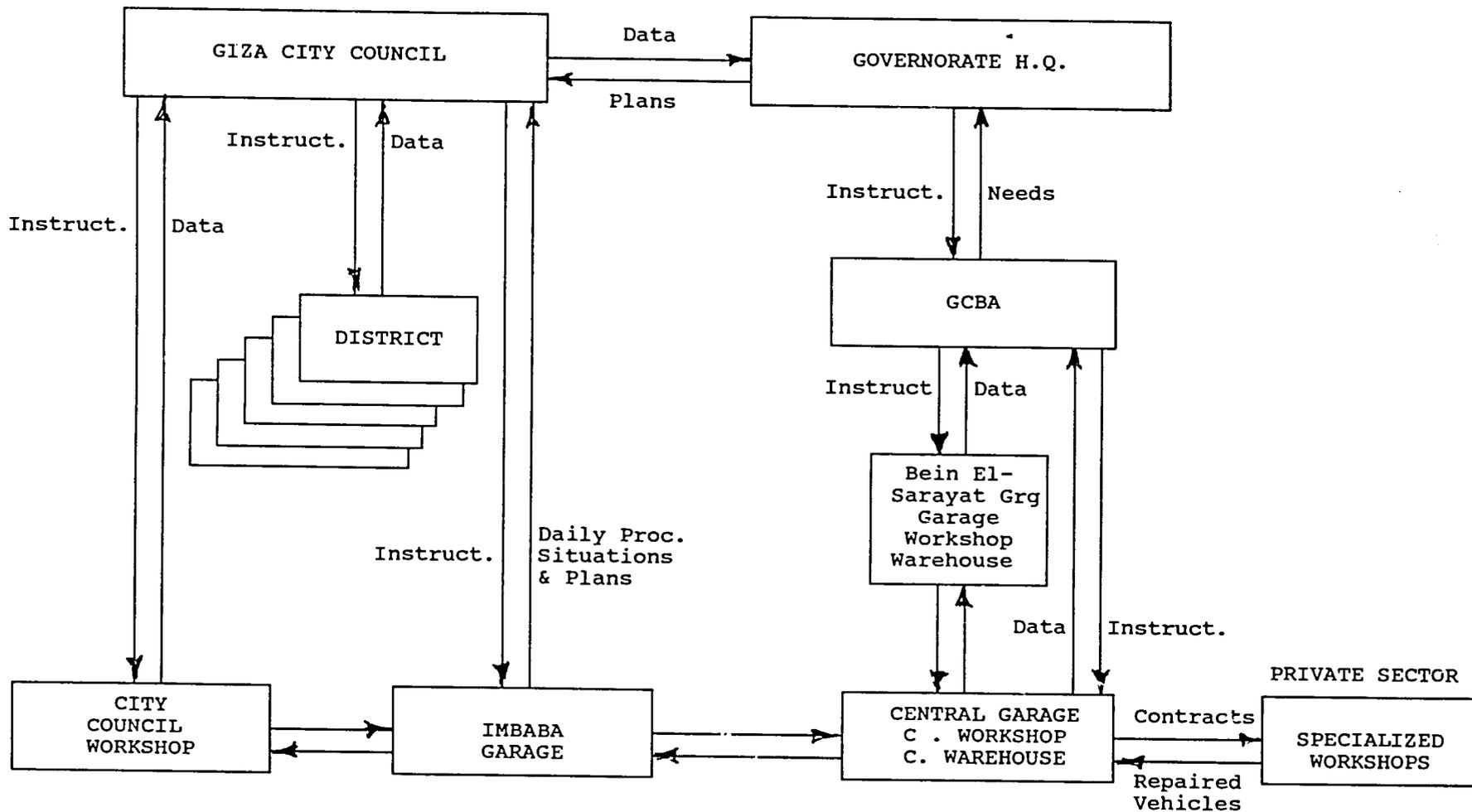
**Stage III** March 1992

1. Transfer the Central Workshop.

**APPENDIX B**

**O&M COMMUNICATION SYSTEM  
AND REPORTING FORMS**

O&M COMMUNICATION & REPORTING SYSTEM IN GIZA



15

FORM NO. OM-01

VEHICLE / EQUIPMENT DATA SHEET

Governorate : District : Date: / /19

I. BASIC DATA:

Vehicle/Equip. Name:	Plate No.:	
Make :	Model :	VIN:
Year Manufacture :	Date Received : / /	
Engine :	Type : HP:	Engine No.:
No. of Cylinders :	Cooling System :	
Equip. Engine :	Type : HP :	Engine No.:
Capacity : WT. Empty: (tons)	Loaded : (tons)	
Length : (cm) Width : (cm) Height : (cm)		
Transmission :		
Chassis Type :	Chassis No. :	

II. CAPACITIES:

Fuel :	Tank Capacity :	(liters)
Engine Oil Type :	Eng. Oil Capacity :	(liters)
Hydraulic Oil Type :	Tank Capacity :	(liters)

III. TIRES:

No. of tires : Size :

IV. BATTERIES:

No. of Batteries : Capacity AM/HR : No. of Plates :  
Volts :

V. GENERAL CONDITION:

New ( ) Good ( ) Poor ( )  
Need Repair ( ) To be Scrapped ( )

VI. MILEAGE & REPAIR:

Working Hours :	(hr)	Mileage :	(km)
Last Major Repair :	/ /19	Last Medium Repair :	/ /19
Last Annual PM Performed :	/ /19		

Inventory and Status of Fleet

Governorate :

District :

Date: / / 19

S.N.	Vehicle/Equipment Name	Total	I.O	Need Repair			To Be Scrapped	% Availability	Remarks
				1	2	3			

Signature:

Position:

Name :

nm/Inventor

FORM NO. OM - 03  
VEHICLES AND EQUIPMENT  
ANNUAL OPERATION PLAN

GOVERNORATE : \_\_\_\_\_

DISTRICT : \_\_\_\_\_

DATE : \_\_\_\_\_

S.N.	PLATE NO.	TYPE	GROUP	TO DATE MILEAGE (KM-HR)	RESIDUAL MILEAGE TO NEXT REPAIR	ALLOWED ANNUAL OPERATING (HR-KM)	MONTHLY WORKING (KM-HR) - PLANNED & ACTUAL																								ACTUAL ANNUAL WORKING (KM-HR)	RESIDUAL MILEAGE TO NEXT REPAIR
							JUL		AUG		SEP		OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN			
							P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A		

P = Planned

Signature : \_\_\_\_\_

Position : \_\_\_\_\_

Name : \_\_\_\_\_

A = Actual

Approved by : \_\_\_\_\_

Position : \_\_\_\_\_

Signature : \_\_\_\_\_

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FUEL AND OIL MONTHLY CONSUMPTION

Governorate : \_\_\_\_\_

District : \_\_\_\_\_

Date : \_\_\_\_\_

S.N	Plate No.	Veh. Name	Type	Total Mo. Work. KM/HRS		Fuel Consumption in Liters		Oil Consumption in kg			Total Monthly Cost in L.E	Remarks
				Planned	Actual	Gasoline	Diesel	Engine	Hydraul	Brake		
Grand Total												

Fuel Oil Prices in L.E :

Signature : \_\_\_\_\_ Position : \_\_\_\_\_ Name : \_\_\_\_\_

- Liter of Gasoline = L.E
- Liter of Diesel = L.E
- KG of Eng. Oil = L.E
- KG of Hydr. Oil = L.E
- Brake Oil = L.E

